

Workshop Manual

Octavia II 2004 ➤

Octavia II 2010 ➤

Octavia III 2013 ➤

Octavia III 2014 ➤

Gearbox 0AF

Edition 06.2019



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List of Workshop Manual Repair Groups

Repair Group

- 00 - Technical data
- 30 - Clutch
- 34 - Controls, housing
- 35 - Gears, shafts
- 39 - Final drive - differential



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Technical information should always be available to the foremen and mechanics, because their careful and constant adherence to the instructions is essential to ensure vehicle road-worthiness and safety. In addition, the normal basic safety precautions for working on motor vehicles must, as a matter of course, be observed.

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00 – Technical data

1 Safety instructions

(SRL001415; Edition 06.2019)

⇒ [“1.1 Safety precautions when working on vehicles with a start/stop system”, page 1](#) .

1.1 Safety precautions when working on vehicles with a start/stop system



WARNING

On vehicles with start-stop system, there is the risk of injury from automatic engine start.

- ◆ *Deactivate the start-stop system when working on the vehicle. Switch off ignition.*
- ◆ *If required switch on the ignition for a short period of time.*



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2 Identification

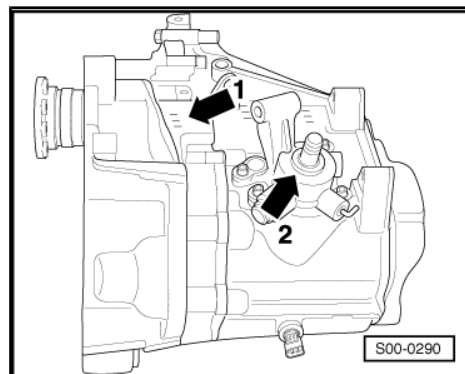
⇒ ["2.1 Gearbox identification", page 2](#)

2.1 Gearbox identification

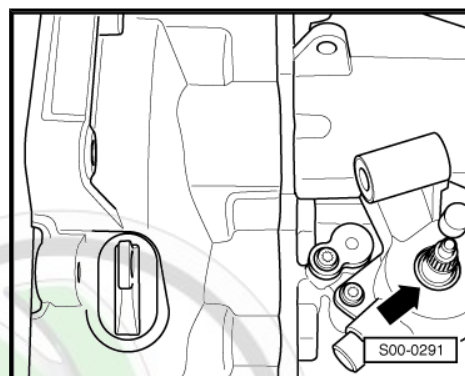
Location on the gearbox

Identification characters and production date -arrow 1-.

Identification of the gearbox 0AF -arrow 2-.



Gearbox 0AF -arrow-



Codes and production date of gearbox

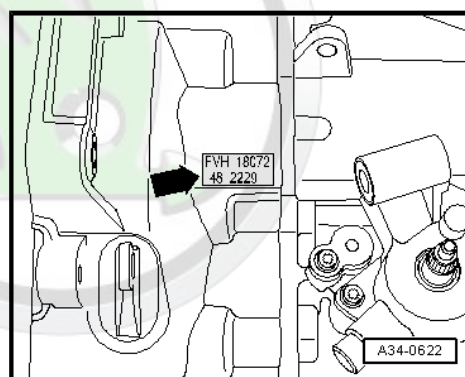
Example:	FVH	18	07	2
	Engine identifica- tion charac- ters	Day	Month	Manufac- turing year (2002)

Additional data provides information about the production facility.



Note

The gearbox identification characters also appear on the vehicle data sticker.

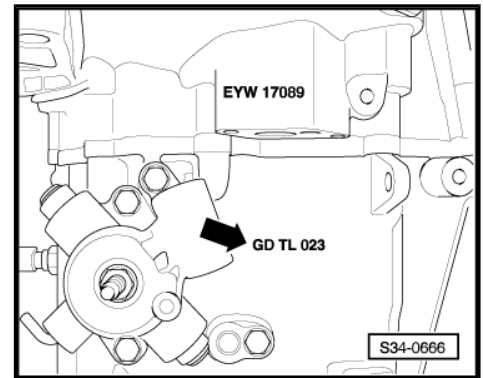


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Identification of materials for the gearbox housing

There is lettering on aluminium gearboxes -arrow- -GD TL 023-, or -AlSi9Cu3- or -AlSi6Cu4-.

One can also use the gearbox identification characters to determine whether it is an aluminium or a magnesium gearbox.



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3 Repair instructions

⇒ [“3.1 General points”, page 4](#)

⇒ [“3.2 Contact corrosion”, page 6](#)

⇒ [“3.3 Seals and sealing rings”, page 7](#)

⇒ [“3.4 Screws, nuts”, page 7](#)

3.1 General points

To ensure flawless and successful gearbox repairs, the greatest care and cleanliness as well as the use of good and proper tools are essential.

Also note the basic rules on safety when performing repair procedures.

A number of generally valid notes for individual repair operations - which are otherwise listed several times at numerous points in the workshop manual - are summarised here.

They apply for this particular workshop manual.

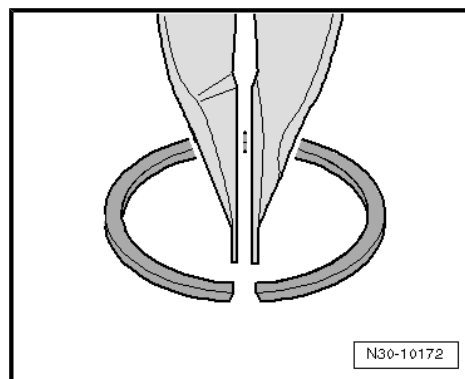
Special tools

For a complete list of special tools used in this workshop manual, see ⇒ Workshop equipment and special tools .

Gearbox

- ◆ When installing the gearbox, ensure the dowel sleeves are correctly located between the engine and gearbox.
- ◆ When installing bearing brackets or waxed components, the contact surfaces must be cleaned. Contact surfaces must be free of wax and grease.
- ◆ Bolts and other attachments should have a classification in the [Electronic Catalogue of Original Parts](#) .
- ◆ When replacing the gearbox, inspect the gearbox oil level and top up with oil if necessary
⇒ [“6.1 Checking the gear oil level”, page 151](#) .
- ◆ Gearbox oil ⇒ Electronic catalogue of original parts .
- ◆ Filling capacity
⇒ [“4.1 Allocation gearbox - engine”, page 8](#) .

Circlips



- ◆ Do not over-tension the circlips.
- ◆ Fitting position for some circlips: the ring is narrower on top, as is its installation position. This makes it possible for the pliers to gain a better grip during removal and installation.
- ◆ After removal, replace retaining rings which have been damaged or overstretched.
- ◆ Circlips must be positioned in the base of the groove.
- ◆ Replace roll pins. Fitting position: Slot -A- along power flow -arrow-.

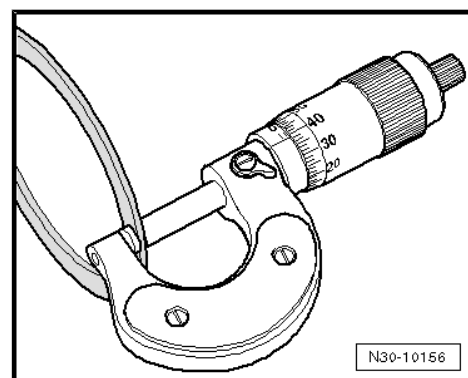
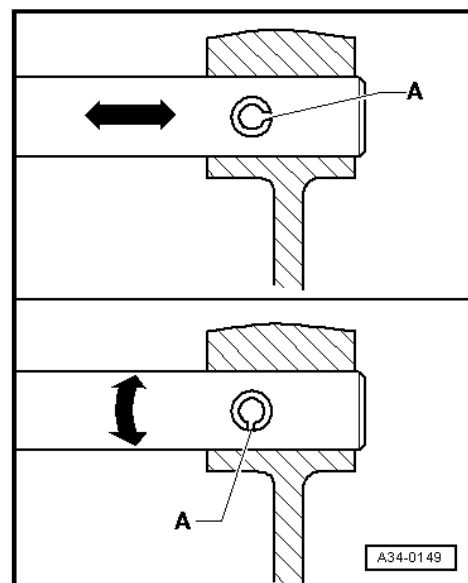
Bearings

- ◆ New taper roller bearings are fitted as supplied and do not require any additional lubrication.
- ◆ Coat all bearings (except tapered roller bearings) of the gearbox with gearbox oil before installation.
- ◆ Heat inner races of tapered roller bearings with the inductive heater - VAS 6414- to approx. 100 °C before installing. Press in to stop when installing so there is no axial clearance.
- ◆ Do not mix up the outer and inner rings of bearings of the same size. The bearings are matched in pairs.
- ◆ Tapered roller bearings fitted to one shaft must be replaced as a set. Use same make of bearings.
- ◆ Install needle bearings, ball sleeves and roller sleeves with lettered side (thicker metal) towards fitting tool.

Shims

- ◆ Gauge shims at several points with a micrometer. The various thicknesses make it possible to achieve the exact shim thickness required.
- ◆ Check for burrs and damage.
- ◆ Install only flawless shims.

Synchro-rings



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- ◆ These are not interchangeable. When reusing synchro-rings, always fit to the same synchromeshed gear.
- ◆ Check for wear and replace if necessary.
- ◆ Check grooves -arrow 1- of synchro-ring -A- and inner ring for flat spots (worn grooves).
- ◆ If synchro-rings are coated, coating must not be damaged.
- ◆ If an intermediate ring -B- is installed, check the outer friction surface -arrow 2- and inner friction surface -arrow 3- of this intermediate ring for »scoring« and »signs of abnormal wear«.
- ◆ Check the cone of the synchromesh gear for »scoring« and »signs of abnormal wear«.
- ◆ Moisten synchromesh mechanism with gear oil before installing.

Gears and synchro-hubs

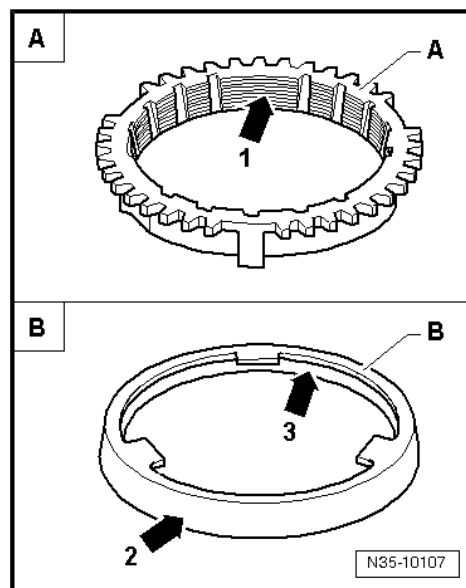
- ◆ Heat synchro-hub with inductive heater - VAS 6414- to approx. 100 °C before installing. Press in to stop when installing so there is no axial clearance.
- ◆ Heat gears with inductive heater - VAS 6414- to approx. 100 °C before installing. Press in to stop when installing so there is no axial clearance.
- ◆ Note installation position.

Synchromeshed gears

- ◆ After assembly, check synchromesh gears for slight play, or for freedom of movement.

Clutch, clutch control

- ◆ If the master cylinder or the slave cylinder is to be replaced, first carry out the functional test
⇒ ["1.14 Checking the master and slave cylinder", page 51](#) .
- ◆ When removing the gearbox, remove the slave cylinder without opening the clutch control.
- ◆ After removing the slave cylinder with the clutch control, do not step on the clutch pedal. Otherwise, the piston can be pressed out of the slave cylinder and thus be destroyed.
- ◆ If the clutch pedal does not return to its initial position after actuation, then the clutch control must be bled
⇒ ["1.13 Bleeding the clutch control", page 49](#) .
- ◆ After installing the slave cylinder, carefully press the clutch pedal. If an unusual sudden resistance is felt, the clutch pedal must not be pressed any further. The ram of the slave cylinder was probably inserted outside the clutch release lever. If more force is applied to the brake pedal, the slave cylinder is destroyed.
- ◆ When removing and installing the clutch pressure plate, loosen crosswise or tighten screws in small steps so as not to tilt them.
- ◆ In order to reduce unpleasant odours if the clutch is burnt, thoroughly clean the clutch housing as well as the flywheel and the engine on the side of the gearbox.



3.2 Contact corrosion

The gearbox housing and the clutch housing are made out of magnesium alloy.

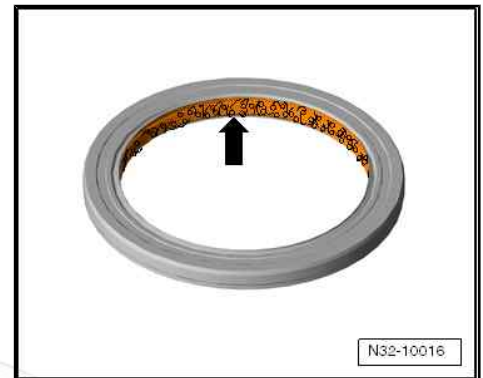
Bolts and other components that come into direct contact with the gearbox have a surface with varying finishes in relation to it.

The use of substitute components causes contact corrosion (screws, nuts, washers). The gearbox housing and clutch housing are damaged.

Generally install parts which are indicated in the ⇒ Electronic Catalogue of Original Parts .

3.3 Seals and sealing rings

- ◆ O-rings, always replace the seal rings and seals after disassembly.
- ◆ After removing all seals, inspect the contact faces on housings and shafts for burrs and damage and remove all which are found.
- ◆ Thoroughly clean the housing separation surfaces before installing the seals.
- ◆ Sealing rings are also referred to as radial (shaft seals).
- ◆ Before installing radial shaft seals, wet the outside circumference and the sealing lip with gear oil and apply sealing grease - G 052 128 A1- to half the space between the sealing lips.
- ◆ The open side of the sealing rings is assembled towards the oil.
- ◆ To coat the rings before installation, use only the oil for the given type of gearbox ⇒ Electronic Catalogue of Original Parts . A different lubricant can cause functional faults.
- ◆ Following installation, change gear oil
⇒ ["6.1 Checking the gear oil level", page 151](#) .



Sealant

- ◆ Thoroughly clean housing joint surfaces before applying sealing paste .
- ◆ Apply sealing paste - AMV 188 200 03- uniformly but not too thick.

3.4 Screws, nuts

- ◆ Loosen the screws in reverse order to the installation order.
- ◆ Slacken and tighten screws or fixing nuts of covers and housings without tightening sequence diagonally across in stages.
- ◆ Replace self-locking nuts after they are removed.
- ◆ Clean the thread of the screws that are inserted with a locking agent with a wire brush. Wet screws that have been cleaned like this with locking agent - AMV 185 101 A1- .
- ◆ Clean all threaded holes into which bolts are screwed in with locking agent, using a thread tap to remove locking agent residues. Otherwise there is a danger of bolts shearing when subsequently being removed.
- ◆ Tightening torques are for unlubricated nuts, bolts and screws.



4 Technical data

⇒ ["4.1 Allocation gearbox - engine", page 8](#)

4.1 Allocation gearbox - engine

⇒ ["4.1.1 Assignment gearbox - engine, Octavia II", page 8](#)

⇒ ["4.1.2 Assignment gearbox - engine, Octavia III", page 9](#)

4.1.1 Assignment gearbox - engine, Octavia II

Manual gearbox	5-speed OAF		
Engine identification characters	FVH	GYT	FXQ
Assignment: Engine	1.6 l/75 kW	1.6 ltr./85 kW FSI	1.4 ltr./55 kW 1.4 ltr./59 kW
Filling capacity	2.0 l		
Specification	⇒ Electronic Catalogue of Original Parts		
Clutch operation	hydraulic		
Clutch disc Ø	⇒ Electronic Catalogue of Original Parts		
Drive shaft flange Ø	100 mm	90 mm	

Manual gearbox	5-speed OAF		
Engine identification characters	JHT	JHW	JHU
Assignment: Engine	1.6 l/75 kW	1.6 ltr./85 kW FSI	1.4 l/59 kW
Filling capacity	2.0 l		
Specification	⇒ Electronic Catalogue of Original Parts		
Clutch operation	hydraulic		
Clutch disc Ø	⇒ Electronic Catalogue of Original Parts		
Drive shaft flange Ø	100 mm	90 mm	

Manual gearbox		5-speed OAF	
Engine identification characters	LVN	LVP	LEG
Assignment: Engine	1.6 l/75 kW	1.4 l/59 kW	
Filling capacity	2.0 l		
Specification	⇒ Electronic Catalogue of Original Parts		
Clutch operation	hydraulic		
Clutch disc Ø	⇒ Electronic Catalogue of Original Parts		
Drive shaft flange Ø	100 mm		

On gearboxes as of production date 06.2009, the springs of the sliding sleeve with synchronizer body for 3rd, 4th and 5th gear are changed (the springs are longer), at the same time the synchronizer ring for 3rd and 4th gear is changed as of this date ⇒ Electronic Catalogue of Original Parts .

Manual gearbox	5-speed OAF		
Engine identification characters	NVT		
Assignment: Engine	1.6 l/75 kW		
Filling capacity	2.0 l		

Manual gearbox	5-speed 0AF
Specification	⇒ Electronic Catalogue of Original Parts
Clutch operation	hydraulic
Clutch disc Ø	⇒ Electronic Catalogue of Original Parts
Drive shaft flange Ø	100 mm

On gearboxes as of production date 06.2009, the springs of the sliding sleeve with synchronizer body for 3rd, 4th and 5th gear are changed (the springs are longer), at the same time the synchronizer ring for 3rd and 4th gear is changed as of this date ⇒ Electronic Catalogue of Original Parts .

4.1.2 Assignment gearbox - engine, Octavia III

Manual gearbox	5-speed 0AF
Engine identification characters	MYE / PKG / PTA / PTB
Assignment: Engine	1.2 I/63 kW TSI
Filling capacity	2.1 ltr.
Specification	⇒ Electronic Catalogue of Original Parts
Clutch operation	hydraulic
Clutch disc Ø	⇒ Electronic Catalogue of Original Parts
Drive shaft flange Ø	100 mm

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5 Overview of Transmission System

⇒ "5.1 Overview of power transmission - front-wheel drive", page 10

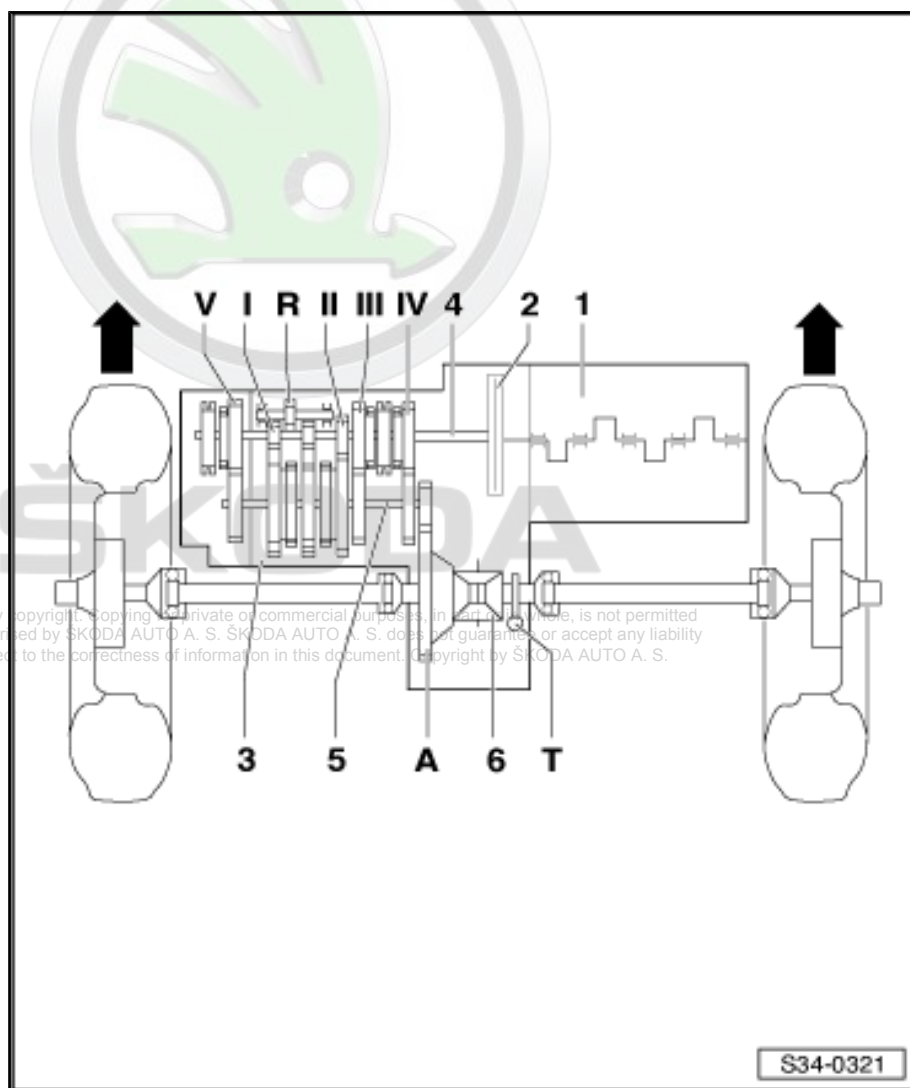
5.1 Overview of power transmission - front-wheel drive



Note

The arrow shows the direction of travel.

- 1 - Engine
- 2 - Clutch
- 3 - Manual gearbox
- 4 - Drive shaft
- 5 - Output shaft
- 6 - Differential
- I - 1st gear
- II - 2nd gear
- III - 3rd gear
- IV - 4th gear
- V - 5th gear
- R - Reverse gear
- A - Final drive
- T - Speedometer drive
 - ☐ with speed sensor, only on older gearboxes



6 Electrical components

⇒ [“6.1 Fitting location summary - electrical components”, page 11](#) .

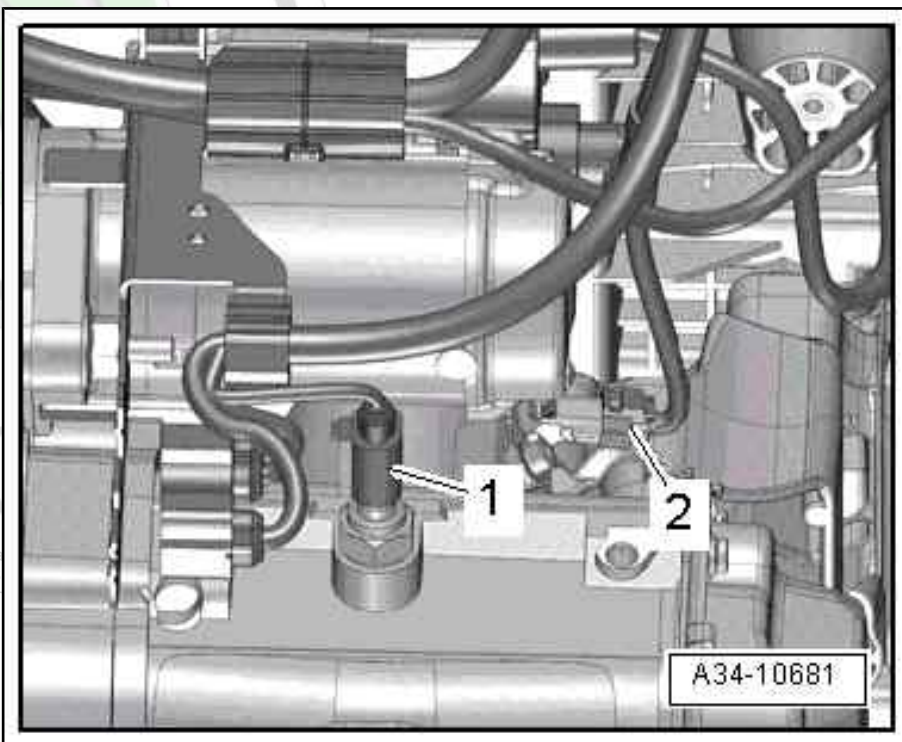
6.1 Fitting location summary - electrical components

1 - Reversing light switch - F4-

- ❑ Fitting position: under the starter
- ❑ Tightening torque
⇒ [“4.4 Summary of components - input shaft, output shafts, differential gear and shift rods”, page 133](#) (Pos. 15)

2 - Gearbox neutral position transmitter - G701-

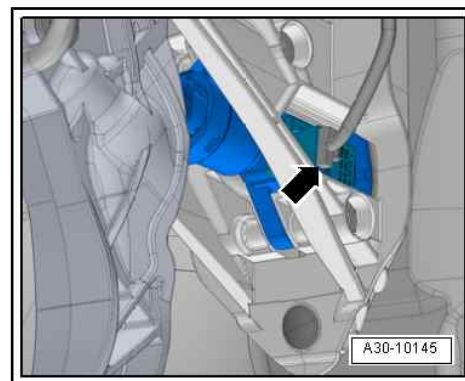
- ❑ Fitting position: in the region of the gearshift unit under the rear bracket used to secure the gearshift shaft
- ❑ Tightening torque
⇒ [“4.4 Summary of components - input shaft, output shafts, differential gear and shift rods”, page 133](#) (Pos. 14)



Clutch position encoder - G476- -Arrow-

Fitting position: in the passenger compartment on the master cylinder.

Removing and installing clutch position sender - G476-
⇒ [“1.15 Removing and installing clutch position sender G476”, page 53](#) .





30 – Clutch

1 Clutch operation

- ⇒ [“1.1 Fitting location overview - clutch control”, page 12](#)
- ⇒ [“1.2 Summary of components - Foot controls”, page 15](#) .
- ⇒ [“1.3 Assembly overview - clutch hydraulics”, page 18](#)
- ⇒ [“1.4 Assembly overview - clutch release mechanism”, page 23](#)
- ⇒ [“1.5 Removing and installing clutch pedal”, page 24](#)
- ⇒ [“1.6 Removing and installing the over-centre helper spring”, page 27](#) .
- ⇒ [“1.7 Remove and install the return spring”, page 30](#)
- ⇒ [“1.8 Removing and installing bearing bush”, page 34](#)
- ⇒ [“1.9 Removing and installing the bearing bracket”, page 35](#)
- ⇒ [“1.10 Removing and installing the master cylinder”, page 41](#)
- ⇒ [“1.11 Removing and installing the slave cylinder”, page 44](#)
- ⇒ [“1.12 Removing and installing cables for clutch control”, page 47](#)
- ⇒ [“1.13 Bleeding the clutch control”, page 49](#) .
- ⇒ [“1.14 Checking the master and slave cylinder”, page 51](#) .
- ⇒ [“1.15 Removing and installing clutch position sender G476”, page 53](#)
- ⇒ [“1.16 Repairing the clutch release mechanism”, page 55](#)

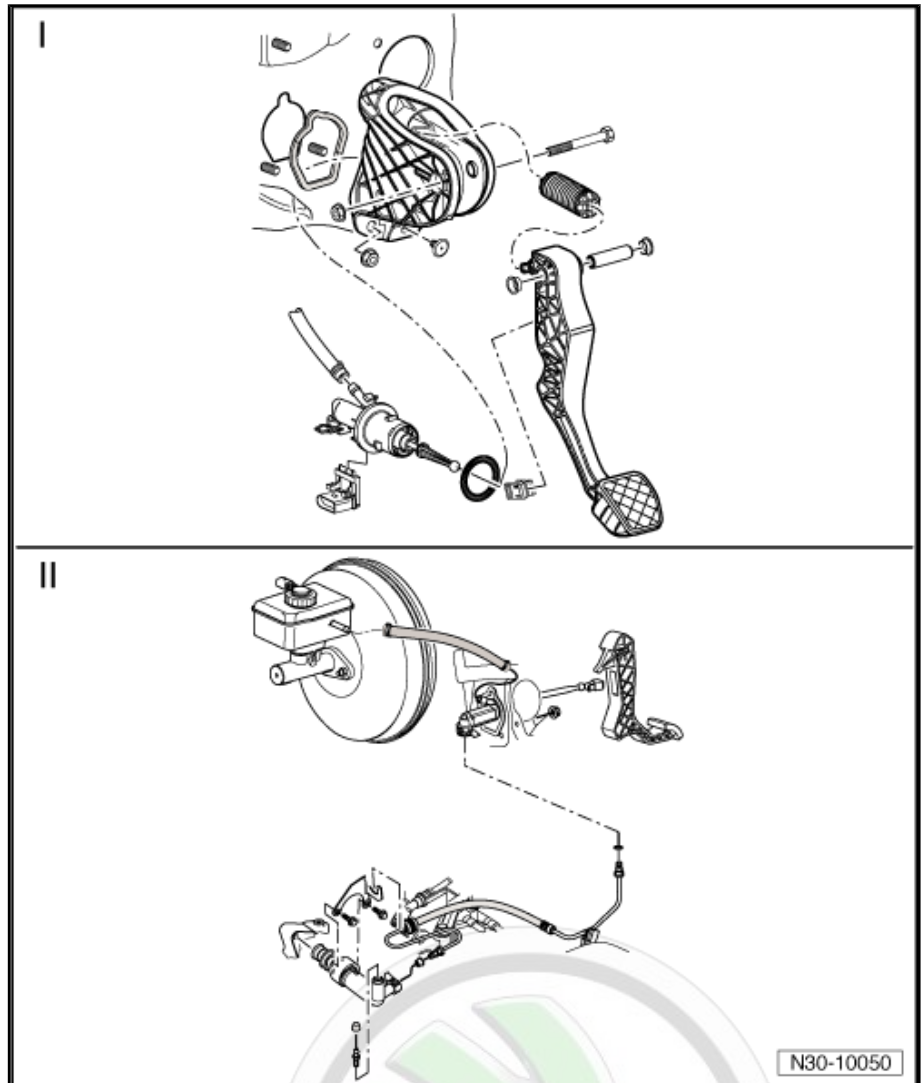
1.1 Fitting location overview - clutch control

- ⇒ [“1.1.1 Fitting location overview - Clutch actuation, Octavia II”, page 12](#)
- ⇒ [“1.1.2 Installation location overview - clutch actuation, Octavia III”, page 14](#)

1.1.1 Fitting location overview - Clutch actuation, Octavia II

1 -
⇒ ["1.2 Summary of components - Foot controls", page 15](#)

2 -
⇒ ["1.3 Assembly overview - clutch hydraulics", page 18](#)



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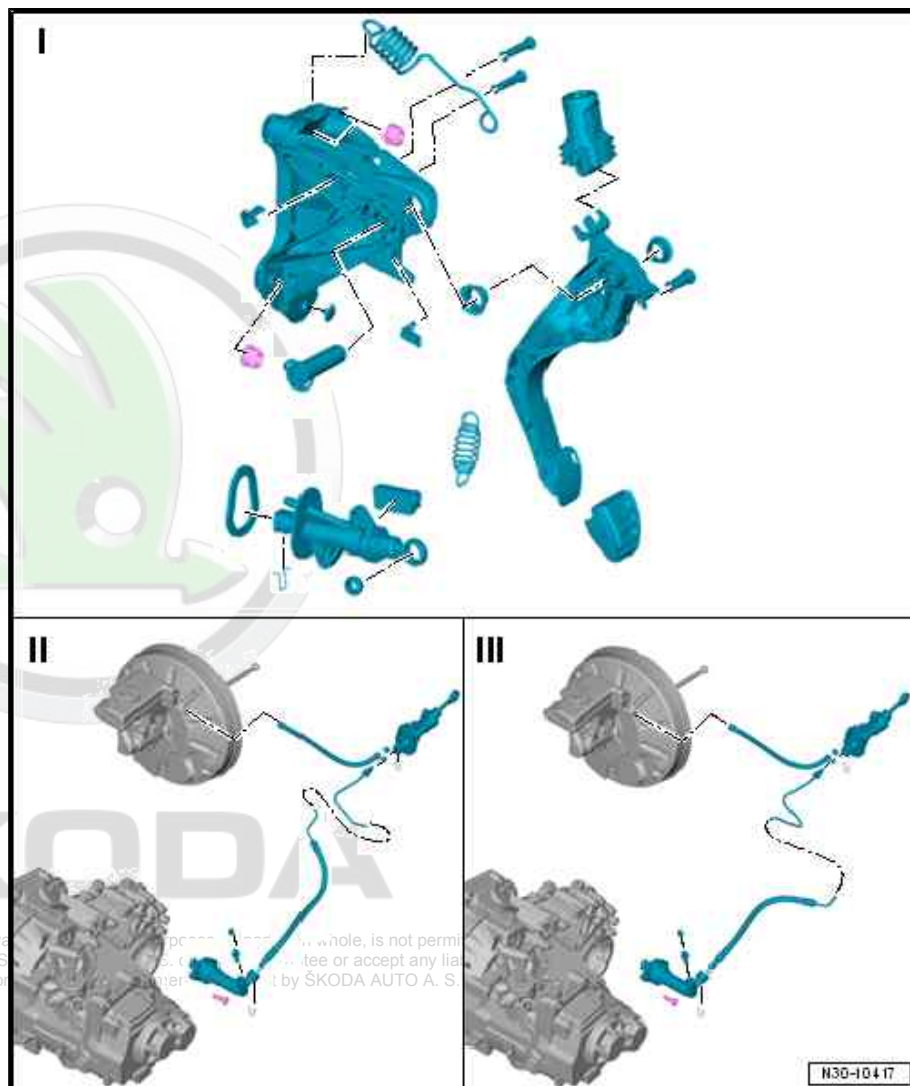
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1.1.2 Installation location overview - clutch actuation, Octavia III

I -
⇒ ["1.2 Summary of components - Foot controls", page 15](#)

II -
⇒ ["1.3 Assembly overview - clutch hydraulics", page 18](#)



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1.2 Summary of components - Foot controls

⇒ ["1.2.1 Summary of components - Foot controls, Octavia II", page 15](#)

⇒ ["1.2.2 Summary of components - Foot controls, Octavia III", page 16](#)

1.2.1 Summary of components - Foot controls, Octavia II

1 - Front wall

- ☐ with mount for bracket

2 - Seal

- ☐ between bracket and front wall
- ☐ self-adhesive
- ☐ glue to bracket
- ☐ Replace after disassembly

3 - Bearing bracket

- ☐ for support of clutch pedal
- ☐ Removing and installing
⇒ ["1.9 Removing and installing the bearing bracket", page 35](#)

4 - Screw

5 - Retractor spring

- ☐ Removing and installing
⇒ ["1.7 Remove and install the return spring", page 30](#)

6 - Bushing

7 - Bearing bolt

8 - Clutch pedal

- ☐ Removing and installing
⇒ ["1.5 Removing and installing clutch pedal", page 24](#)

9 - Support

- ☐ Removing and installing
⇒ ["1.5 Removing and installing clutch pedal", page 24](#)

10 - Seal

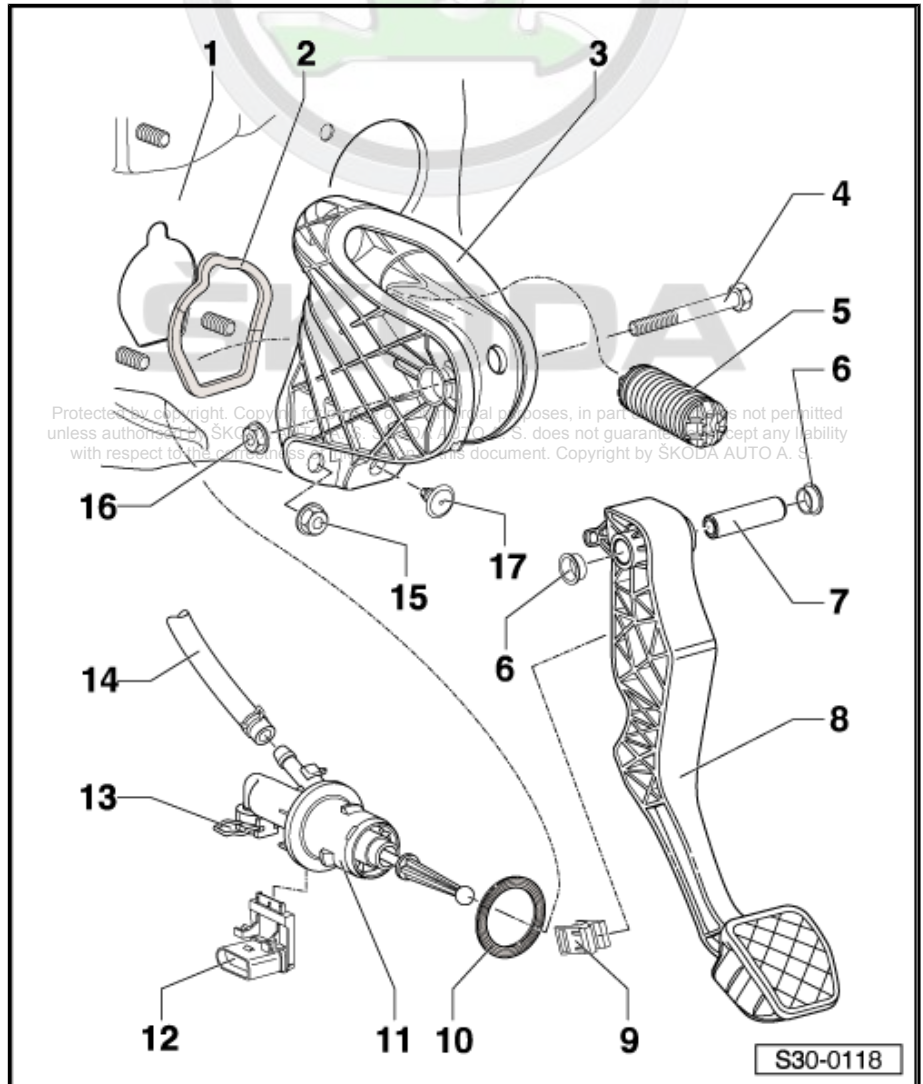
- ☐ between master cylinder and bracket
- ☐ Replace after disassembly

11 - Master cylinder

- ☐ removing and installing after removing the bracket
⇒ ["1.10 Removing and installing the master cylinder", page 41](#)
- ☐ test for tightness ⇒ ["1.14 Checking the master and slave cylinder", page 51](#)

12 - Clutch position sender -G476-

- ☐ Removing and installing ⇒ ["1.15 Removing and installing clutch position sender G476", page 53](#)
- ☐ Check ⇒ Vehicle diagnostic tester.





13 - Clamp

- to remove and install the tube-hose line pull out clamp up to the stop

14 - Supply hose

- out of rubber
- as of 12.2005 on certain vehicles out of plastic ➔ [page 20](#)
- if the return hose is made out of plastic, do not use hose clamp - MP7-602-
- Check for leaks ➔ ["1.14 Checking the master and slave cylinder", page 51](#)

15 - 20 Nm

- 3 units
- self-locking
- for bracket on front wall
- Replace after disassembly

16 - 25 Nm

- Replace after disassembly

17 - Stop

- for the clutch pedal

1.2.2 Summary of components - Foot controls, Octavia III

1 - Master cylinder

- Removing and installing
➔ ["1.10 Removing and installing the master cylinder", page 41](#)

2 - Bushing

- Removing and installing
➔ ["1.8 Removing and installing bearing bush", page 34](#)
- is not lubricated

3 - Clamp

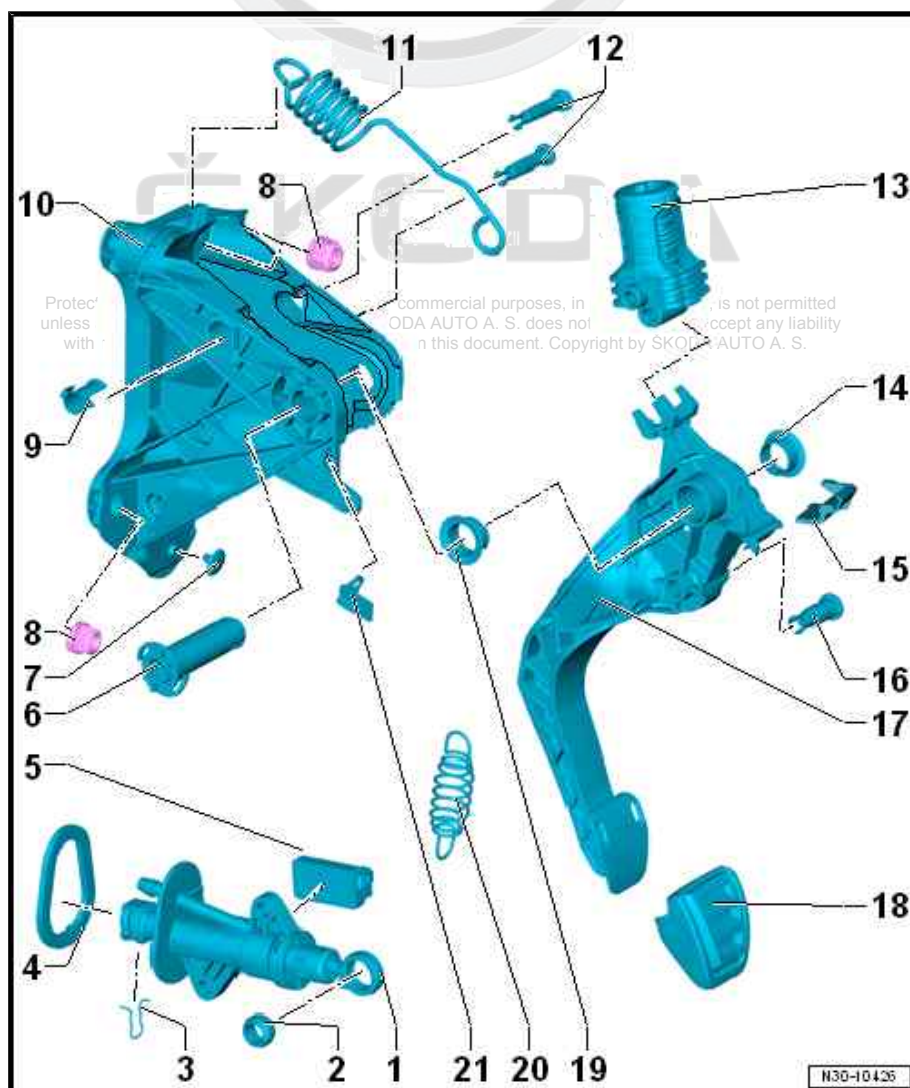
- to remove and install the tube-hose line pull out clamp up to the stop

4 - Seal

- self-adhesive
- replace after removing the master cylinder
- stick onto the master cylinder

5 - Clutch position sender - G476-

- check ➔ Vehicle diagnostic tester in the operating mode Targeted fault finding
- Assignment ➔ Electronic Catalogue of Original Parts
- Removing and installing
➔ ["1.15 Removing and installing clutch position](#)



[sender G476 "](#)
[page 53](#)

6 - Carrier bolt

- ☐ Replace after disassembly
- ☐ is not lubricated

7 - Spring stop

8 - Hexagon nut, 25 Nm

- ☐ Pillar to front wall
- ☐ 3 units
- ☐ self-locking
- ☐ Replace after disassembly

9 - Bearing shell

- ☐ 2 units
- ☐ is fitted on both sides
- ☐ fitted only with over-centre helper spring
- ☐ is not lubricated

10 - Console

- ☐ for the clutch pedal
- ☐ Removing and installing ⇒ ["1.9 Removing and installing the bearing bracket", page 35](#)
- ☐ Drive in bushings into the bores for mounting bolts console/front wall mandrel - VW 207-

11 - Retractor spring

- ☐ installed according to the type
- ☐ Removing and installing ⇒ ["1.7 Remove and install the return spring", page 30](#)
- ☐ Do not lubricate bearing on console

12 - Carrier bolt

- ☐ for master cylinder
- ☐ Replace after disassembly
- ☐ is not lubricated

13 - Over-centre helper spring

- ☐ installed according to the type
- ☐ different versions, assignment ⇒ Electronic Catalogue of Original Parts
- ☐ Removing and installing ⇒ ["1.6 Removing and installing the over-centre helper spring", page 27](#)
- ☐ is not lubricated

14 - Bushing

- ☐ is not lubricated

15 - Sliding sleeve

- ☐ installed according to the type
- ☐ Bearing for retractor spring
- ☐ is slid onto the clutch pedal
- ☐ Coat the bearing for the return spring with grease ⇒ Electronic Catalogue of Original Parts

16 - Carrier bolt

- ☐ of the master cylinder tappet
- ☐ Replace after disassembly
- ☐ is not lubricated

17 - Clutch pedal

- ☐ Removing and installing ⇒ ["1.5 Removing and installing clutch pedal", page 24](#)
- ☐ is not lubricated



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18 - Pedal rubber

19 - Bushing

- ☐ is not lubricated

20 - Tension spring

- ☐ for the clutch pedal
- ☐ installed according to the type
- ☐ Removing and installing ⇒ ["1.7 Remove and install the return spring", page 30](#)
- ☐ is not lubricated

21 - Damping element

- ☐ only fitted with tension spring
- ☐ is not lubricated

1.3 Assembly overview - clutch hydraulics

⇒ ["1.3.1 Summary of components - clutch hydraulics - Octavia II", page 18](#)

⇒ ["1.3.2 Summary of components - clutch hydraulics, Octavia III", page 20](#)

1.3.1 Summary of components - clutch hydraulics - Octavia II

1 - Brake fluid reservoir

- ☐ Check for leaks
⇒ ["1.14 Checking the master and slave cylinder", page 51](#)

2 - Spring strap clamp

- ☐ is not installed on all vehicles

3 - Supply hose

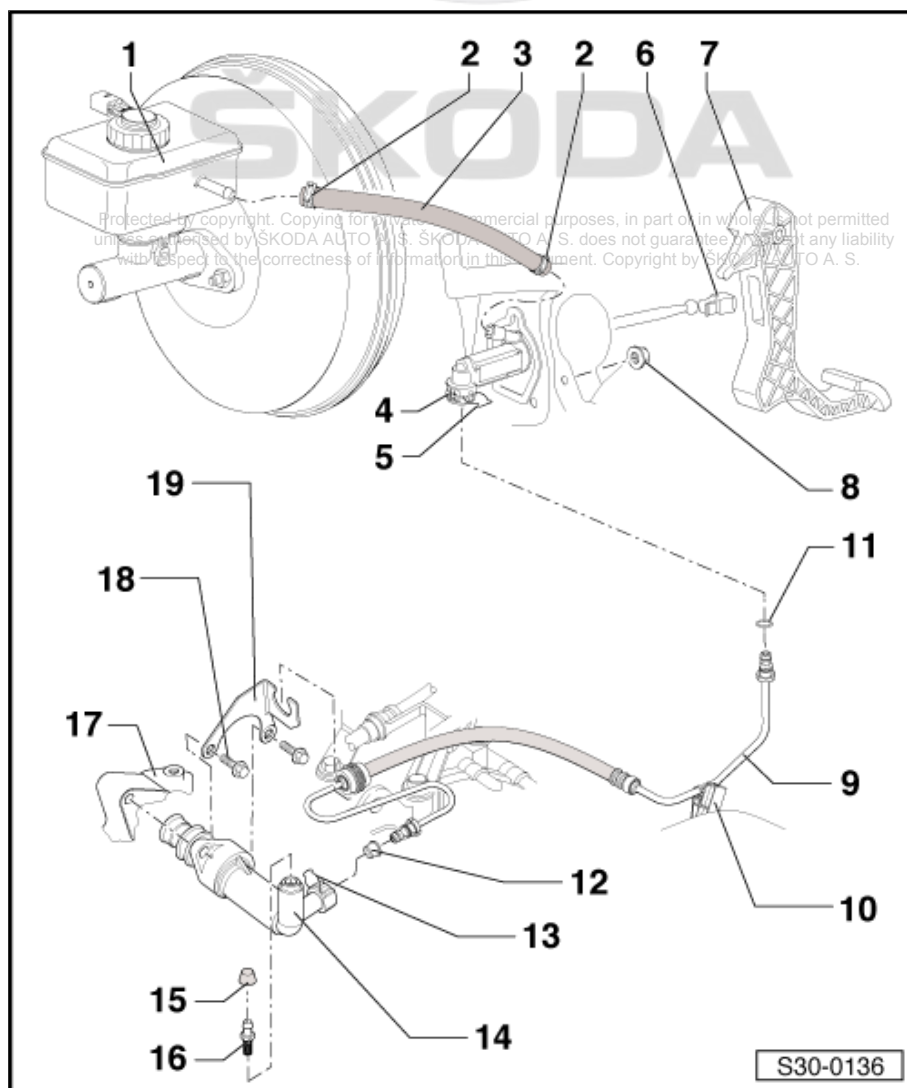
- ☐ as of 12.2005 on certain vehicles out of plastic
⇒ [page 20](#)
- ☐ out of rubber
- ☐ if the return hose is made out of plastic, do not use hose clamp - MP7-602-
- ☐ Check for leaks
⇒ ["1.14 Checking the master and slave cylinder", page 51](#)

4 - Master cylinder

- ☐ Removing and installing
⇒ ["1.10 Removing and installing the master cylinder", page 41](#)
- ☐ Check for leaks
⇒ ["1.14 Checking the master and slave cylinder", page 51](#)

5 - Clamp

- ☐ to remove and install the tube-hose line pull out



clamp up to the stop

6 - Support

- ☐ Removing and installing ⇒ [“1.5 Removing and installing clutch pedal”, page 24](#)

7 - Clutch pedal

- ☐ Removing and installing ⇒ [“1.5 Removing and installing clutch pedal”, page 24](#)

8 - 20 Nm

- ☐ for bearing bracket on body
- ☐ Replace after disassembly

9 - Tube-hose line

- ☐ on certain vehicles a plastic cable can be used
- ☐ Assignment ⇒ Electronic Catalogue of Original Parts
- ☐ Remove battery and battery tray for removing ⇒ Electrical System; Rep. gr. 27
- ☐ Check for leaks ⇒ [“1.14 Checking the master and slave cylinder”, page 51](#)

10 - Mounting bracket

- ☐ mounted at the structure
- ☐ for tube-hose line Pos. 9

11 - O-ring

- ☐ pull onto line connection
- ☐ moisten with brake fluid to install
- ☐ do not interchange, the O-rings Pos. 11 and Pos. 12 are different ⇒ [page 20](#)
- ☐ Replace after disassembly
- ☐ Assignment ⇒ Electronic Catalogue of Original Parts
- ☐ Check for leaks ⇒ [“1.14 Checking the master and slave cylinder”, page 51](#)

12 - O-ring

- ☐ Replace after disassembly
- ☐ pull onto line connection
- ☐ moisten with brake fluid to install
- ☐ do not interchange, the O-rings Pos. 11 and Pos. 12 are different ⇒ [page 20](#)
- ☐ Assignment ⇒ Electronic Catalogue of Original Parts
- ☐ Check for leaks ⇒ [“1.14 Checking the master and slave cylinder”, page 51](#)

13 - Clamp

- ☐ to remove and install the tube-hose line pull out clamp up to the stop

14 - Slave cylinder

- ☐ Removing and installing ⇒ [“1.11 Removing and installing the slave cylinder”, page 44](#)
- ☐ Check for leaks ⇒ [“1.14 Checking the master and slave cylinder”, page 51](#)

15 - Dust cap

16 - Vent valve

- ☐ Bleeding the clutch control ⇒ [“1.13 Bleeding the clutch control”, page 49](#)

17 - Gearbox

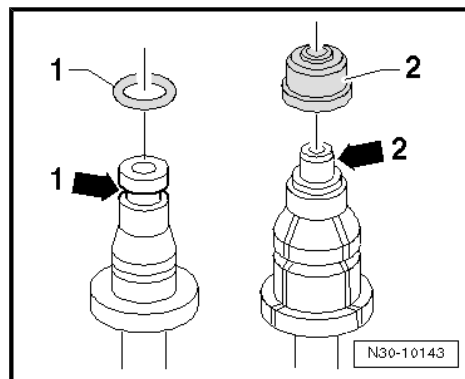
18 - 20 Nm

19 - Mounting bracket



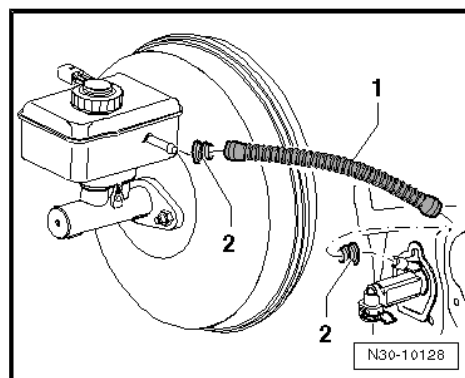
O-rings for tube-hose lines

- ◆ -1- Line connection with circular slot -arrow 1-
- ◆ -2- Line connection with collar -arrow 2-



as of 12.2005 return hose -1- made of plastic on certain vehicles

- ◆ Gaskets -2- must be present on the return hose.
- ◆ Do not use hose clamp - MP7-602- .



1.3.2 Summary of components - clutch hydraulics, Octavia III



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1 - Screw, 20 Nm

- ☐ 2 units

2 - Vent valve, 4.5 Nm

- ☐ Bleeding the clutch control
⇒ [“1.13 Bleeding the clutch control”, page 49](#)

3 - Dust cap

4 - Supply hose

5 - Brake fluid reservoir

6 - Seal

- ☐ must be located on the return hose

7 - Master cylinder

- ☐ Removing and installing
⇒ [“1.10 Removing and installing the master cylinder”, page 41](#)

8 - Clamp

- ☐ to remove and install the tube-hose line pull out clamp up to the stop

9 - Gasket ring/O-ring

- ☐ replace if damaged
- ☐ fit onto the line connection
- ☐ insert with brake fluid
- ☐ Gasket rings/O-rings are adapted to the version of the line connection ⇒ [page 22](#)

- ☐ Assignment ⇒ Electronic Catalogue of Original Parts

10 - Mounting bracket

- ☐ for tube-hose line
- ☐ different mounting brackets on left-hand and right-hand drive vehicles
- ☐ Assignment ⇒ Electronic Catalogue of Original Parts

11 - Tube-hose line

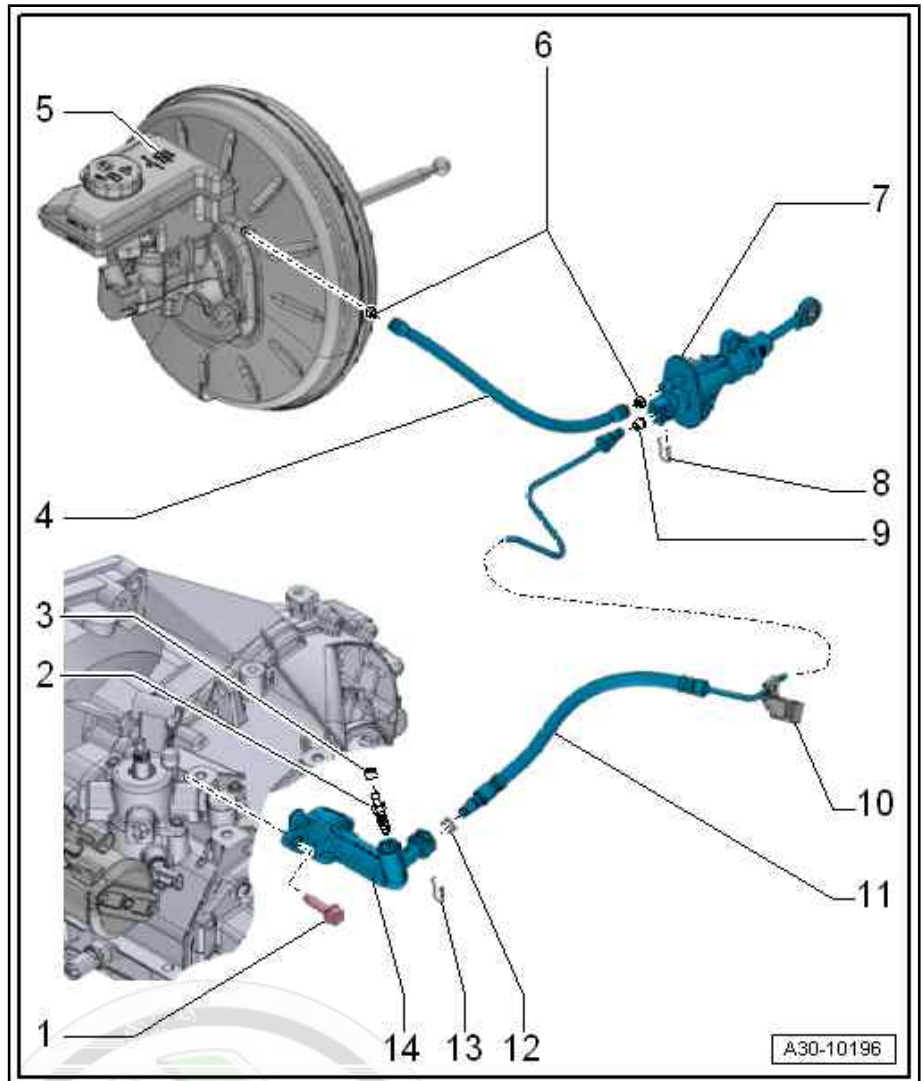
- ☐ different lengths on left-hand and right-hand drive vehicles
- ☐ Assignment ⇒ Electronic Catalogue of Original Parts
- ☐ Removing and installing ⇒ [“1.12 Removing and installing cables for clutch control”, page 47](#)

12 - Gasket ring/O-ring

- ☐ replace if damaged
- ☐ fit onto the line connection
- ☐ insert with brake fluid
- ☐ Gasket rings/O-rings are adapted to the version of the line connection ⇒ [page 22](#)
- ☐ Assignment ⇒ Electronic Catalogue of Original Parts

13 - Clamp

- ☐ to remove and install the tube-hose line pull out clamp up to the stop





14 - Slave cylinder

- Removing and installing ⇒ ["1.11 Removing and installing the slave cylinder", page 44](#)

Disconnect the cables for the clutch control and connect

Disconnect

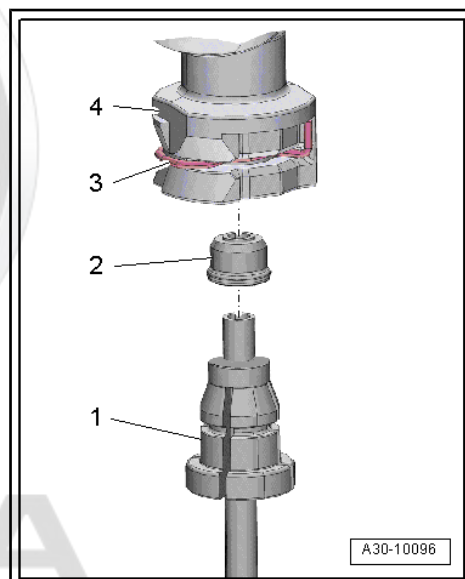
- Unlock the clip -3- with a screwdriver and disconnect the tube-hose line -1- from the connection -4-.

Connect



Note

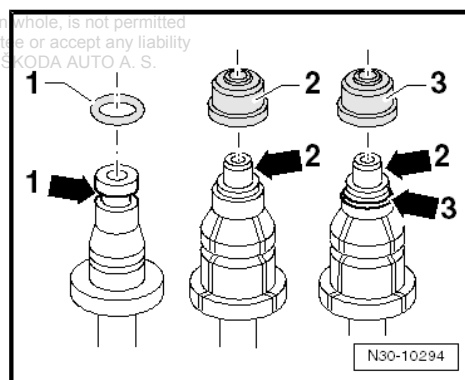
- ♦ An O-ring can also be installed instead of the gasket ring -2- ⇒ [page 22](#).
- ♦ Replace damaged gasket ring -2-.
- Push in the tube-hose line -1- at the connection -4- until the clip -3- locks audibly into place.
- For testing pull on the tube-hose line.



Gasket rings/O-rings for tube-hose lines and/or pipes

Position	Material of line connection
1	Line connection with circumferential groove -arrow 1-
2	Line connection with shoulder -arrow 2-
3	Line connection with shoulder -arrow 2- and circumferential groove -arrow 3-

- In case of a line connection with round slot -arrow 1- and -arrow 3-, a gasket ring/O-ring must be inserted.



1.4 Assembly overview - clutch release mechanism

1 - Clutch release lever

- ☐ Remove and install together with release bearing and guide bushing
- ☐ Remove original grease
- ☐ Grease contact surface on the ball stud with grease - G 000 100-

2 - Release bearing

- ☐ Remove and install together with the clutch release lever and guide bushing
- ☐ Do not wash out bearing; wipe only
- ☐ replace noisy bearings

3 - Screw, 5 Nm + torque a further 90° (1/4 turn)

- ☐ Replace after disassembly

4 - Slave cylinder

- ☐ Removing and installing
⇒ ["1.11 Removing and installing the slave cylinder", page 44](#)

5 - Gearbox

6 - Sealing ring

- ☐ for drive shaft
- ☐ Replace
⇒ ["1.3 Replacing input shaft sealing ring", page 160](#)

7 - Guide bushing

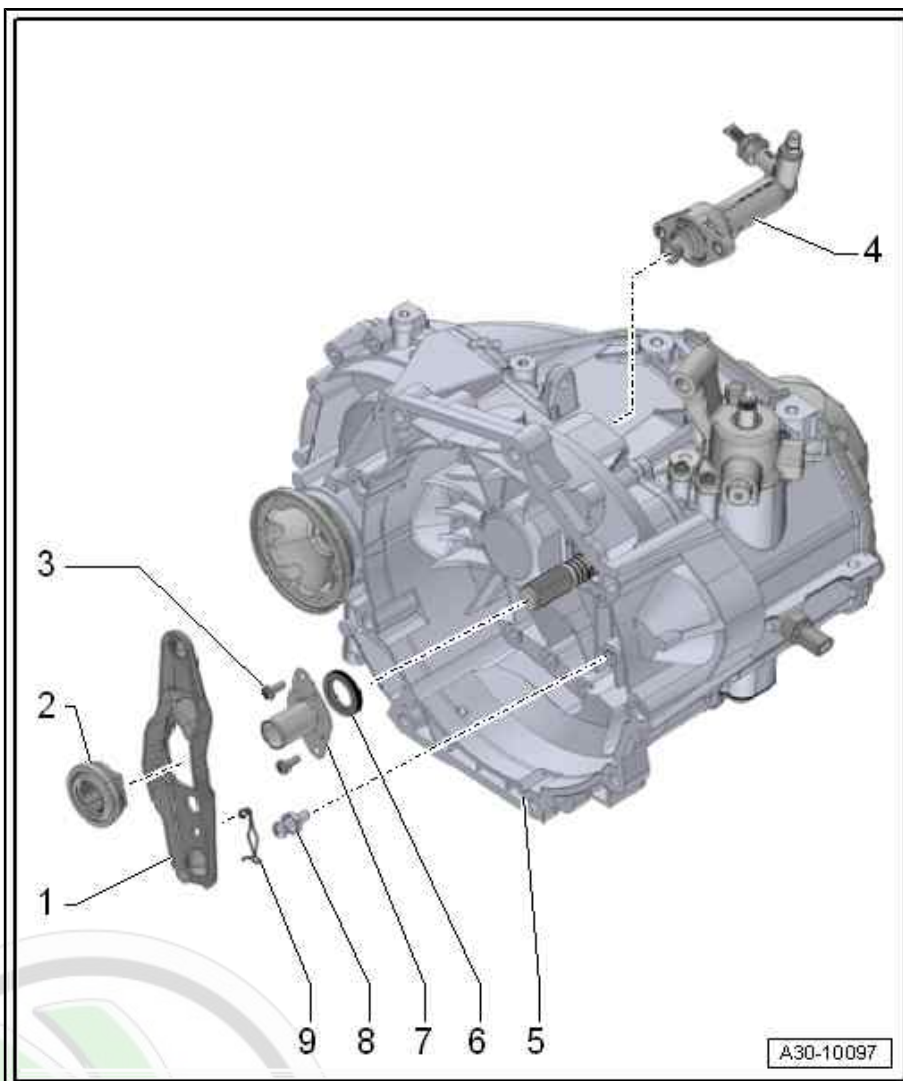
- ☐ remove and install together with the clutch release lever and clutch release bearing
⇒ ["2.2 Removing and installing clutch", page 59](#)

8 - Ball stud, 20 Nm

- ☐ Remove original grease
- ☐ Grease contact surface on the ball stud with grease - G 000 100-

9 - Retaining spring

- ☐ secured to clutch release lever



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1.5 Removing and installing clutch pedal

⇒ "1.5.1 Removing and installing clutch pedal, Octavia II",
page 24

⇒ "1.5.2 Removing and installing clutch pedal, Octavia III",
page 26

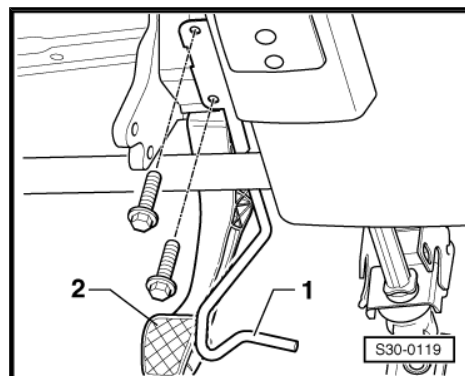
1.5.1 Removing and installing clutch pedal, Octavia II

Special tools and workshop equipment required

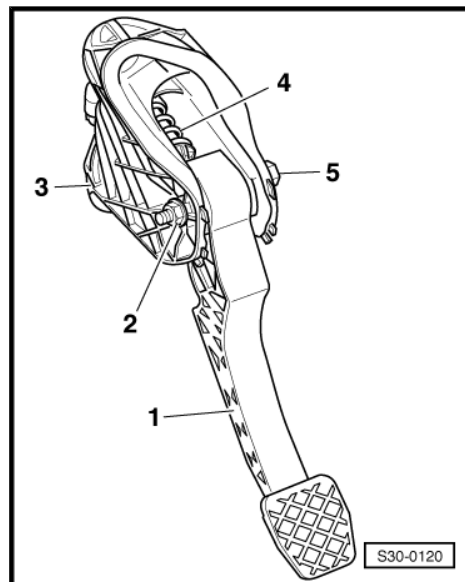
- ◆ Pliers - T10005-
- ◆ Release tool - T10178-

Removing

- Push the driver seat as far as possible towards the rear and position the steering wheel in the highest position.
- Remove lower part of the dash panel insert on the driver's side
⇒ Body; Rep. gr. 70 Work.
- Unscrew crash strut -1- in front of the clutch pedal -2-.



- Unscrew clutch pedal -1- from bracket -3-, to this end release nut -2- and pull out screw -5-.
- Swivel clutch pedal forwards slightly, and remove retractor spring -4- from the bearing bracket.



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- Release support of actuating rod of master cylinder with the pliers - T10005- .
- Remove clutch pedal.

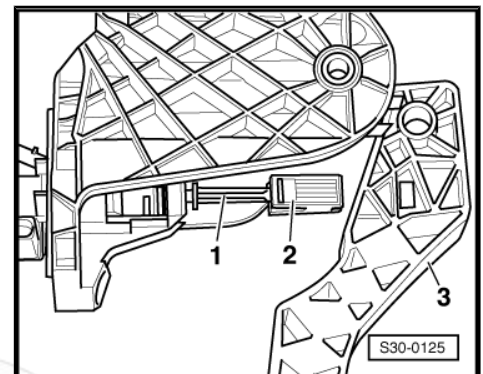
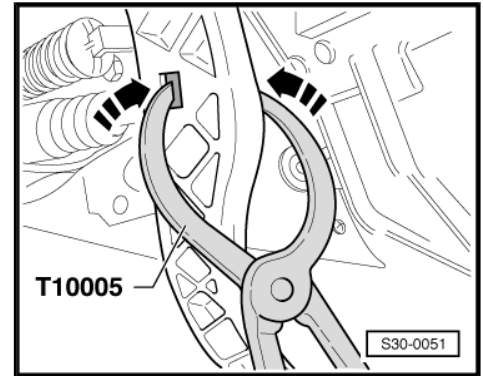
Installing

Installation is carried out in the reverse order. When installing, observe the following:

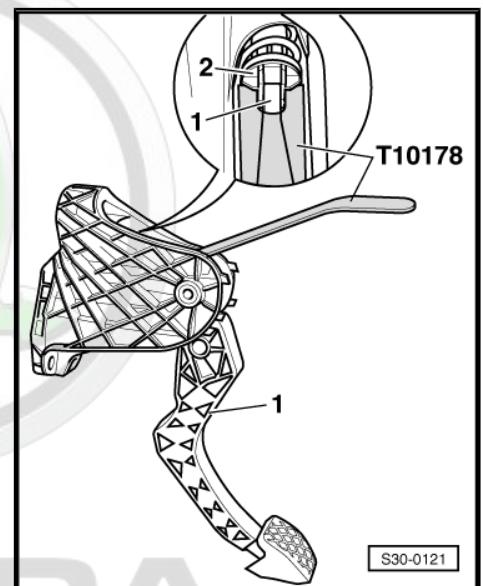


Replace self-locking nut.

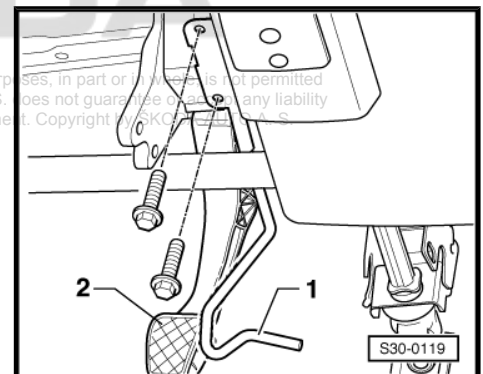
- Mount support -2- to the actuator rod -1- of the master cylinder.
- Press support into the clutch pedal until it audibly clicks into place.



- Insert retractor spring from above into the bearing bracket and while doing so hold the spring end in the fitting position using the release tool -T10178- .
- Insert bearing bolt of clutch pedal into the step bearing of the retractor spring.
- Press on clutch pedal slightly, slide through screw and tighten self-locking nut.



- Screw on crash strut -1- in front of the clutch pedal -2-.
- Install lower part of the dash panel insert on the driver's side
⇒ Body Work; Rep. gr. 70





Tightening torques

Component	Tightening torque
Crash bar	9 Nm
Clutch pedal to bracket ¹⁾	⇒ "1.2 Summary of components - Foot controls", page 15

¹⁾ Replace self-locking nut.

1.5.2 Removing and installing clutch pedal, Octavia III

Removing

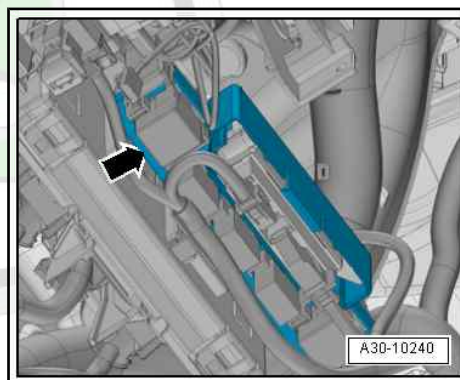
- Push the driver seat as far as possible towards the rear.
- Push steering wheel as far as possible towards the top, while doing so use the entire adjustment range of the steering column.
- If present in the console area: remove the -arrow- holder with Control unit for parking aid - J446- Remove ⇒ Electrical system; Rep. gr. 94 ; parking aid; remove and install the control unit for parking aid - J446- and push to the side.

Right-hand drive with Climatronic system

- Remove the right temperature flap control motor - V159- ⇒ Heating system, air conditioning system; Rep. gr. 87 ; Control motors; removing and installing right temperature flap control motor - V159- .

Continued for all versions

- Remove retractor spring
⇒ ["1.7 Remove and install the return spring", page 30](#) or over-centre helper spring
⇒ ["1.6 Removing and installing the over-centre helper spring", page 27](#) .



Remove the bearing bolt for the clutch pedal as follows:

- 1- - Socket wrench (SW 14)

Left-hand drive

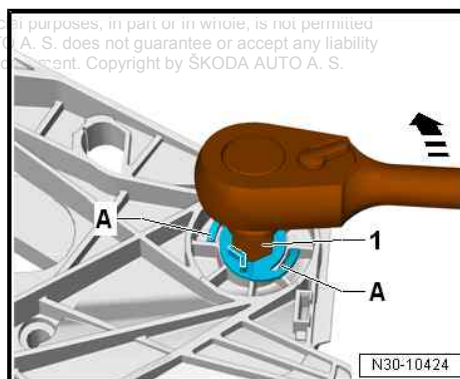
Instead of the socket wrench (SW 14) you can also use an Allen key (SW 14).

Continued for all versions

- For this purpose, turn the bearing bolt for the clutch pedal towards the left -in direction of arrow-.

The catches -A- are thereby destroyed.

- Slightly move the clutch pedal in order to pull out the bearing bolt.



Installing

Installation is performed in the reverse order, while paying attention to the following:

- 1- - Socket wrench (SW 14)

Left-hand drive

Instead of the socket wrench (SW 14) you can also use an Allen key (SW 14).

Continued for all versions

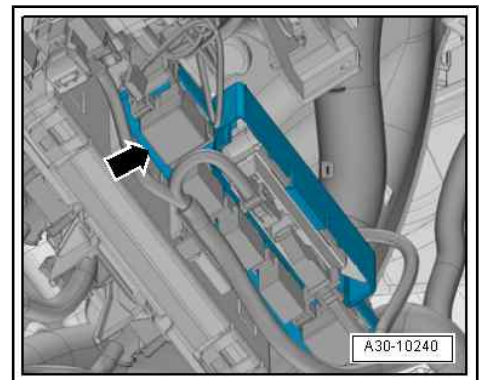
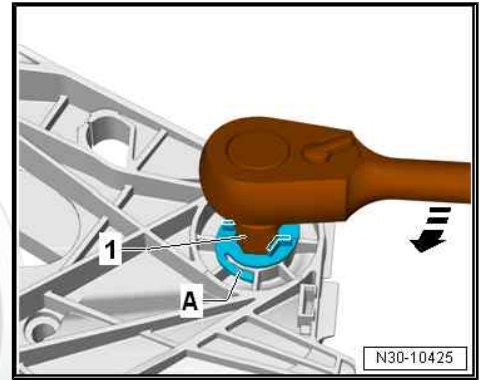
- Replace the pin after removing.
- Slight press on the clutch pedal and insert a new bearing bolt as far as it will go.
- Turn the bearing bolt to the right as far as it will go -in direction of arrow-.
- The catches -A- must click audibly into place.
- Install retractor spring
⇒ [“1.7 Remove and install the return spring”, page 30](#) or
over-centre helper spring
⇒ [“1.6 Removing and installing the over-centre helper spring”, page 27](#) .

Right-hand drive with Climatronic system

- Install the right temperature flap control motor - V159- ⇒ Heating system, air conditioning system; Rep. gr. 87 ; Control motors; removing and installing right temperature flap control motor - V159- .

Continued for all versions

- If installed, Install the bracket -arrow- with the ECU for park distance control - J446- ⇒ Electrical system; Rep. gr. 94 ; Park distance control; ECU for park distance control - J446- remove and install .



1.6 Removing and installing the over-centre helper spring

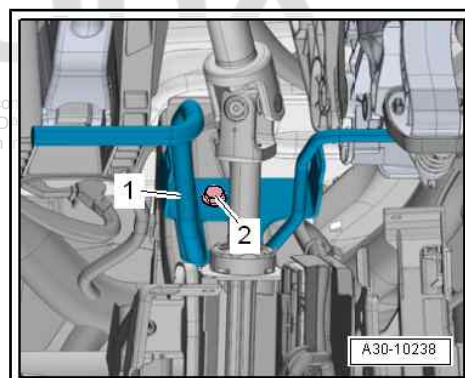
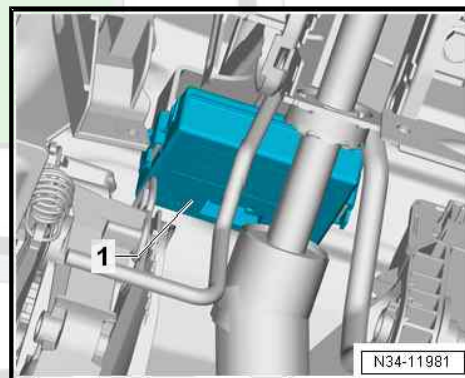
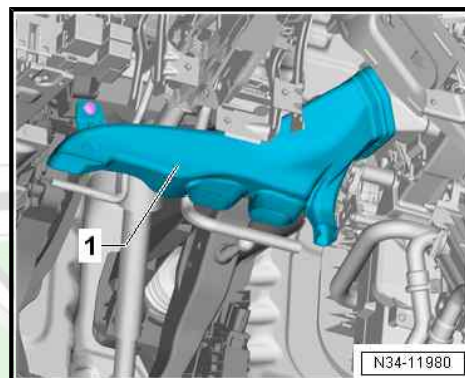
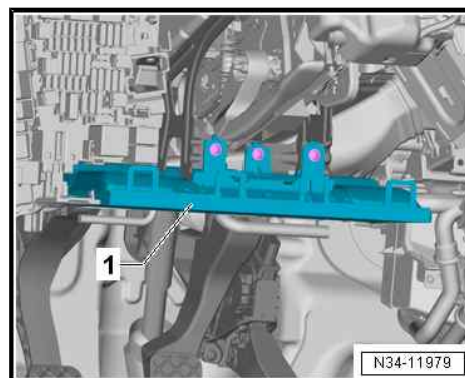
Removing

- With ignition switched off, disconnect battery earth strap ⇒ Electrical system; Rep. gr. 27 ; Battery; Disconnecting and connecting battery .
- Push the driver seat as far as possible towards the rear.
- Push steering wheel as far as possible towards the top, while doing so use the entire adjustment range of the steering column.



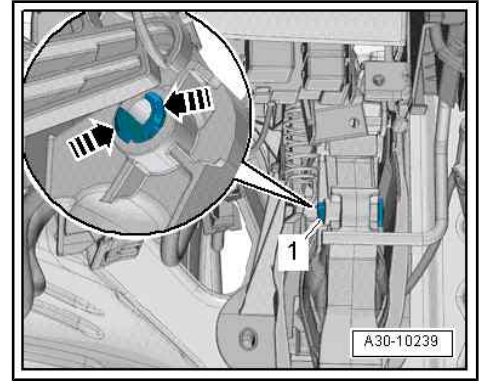
Vehicles with knee airbag

- Remove knee airbag -1- ⇒ Interior body work; Rep. gr. 69 ; Knee airbags; removing and installing knee airbag with ignition .
- Remove the footwell vent -1- on the driver side ⇒ Heating system, air conditioning system; Rep. gr. 87 ; Air duct element; remove and install driver side footwell vent .
- Remove data bus diagnostic interface - J533- -1- from bracket ⇒ Electrical System; Rep. gr. 97 ; Control units; Summary of components - data bus diagnostic interface and push to the side.
- Unscrew screw -2-, unhook crash strut -1- and push it to the side.



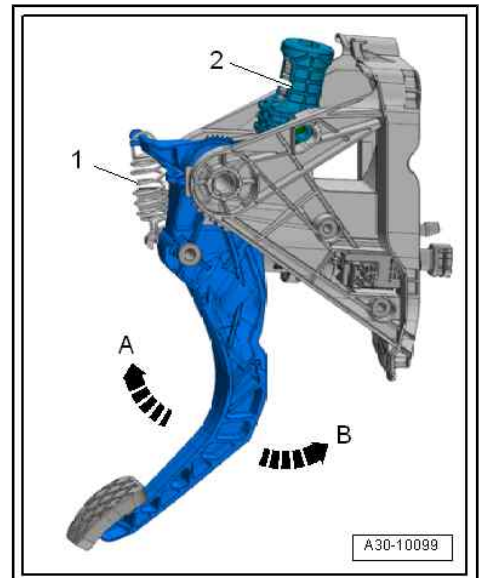
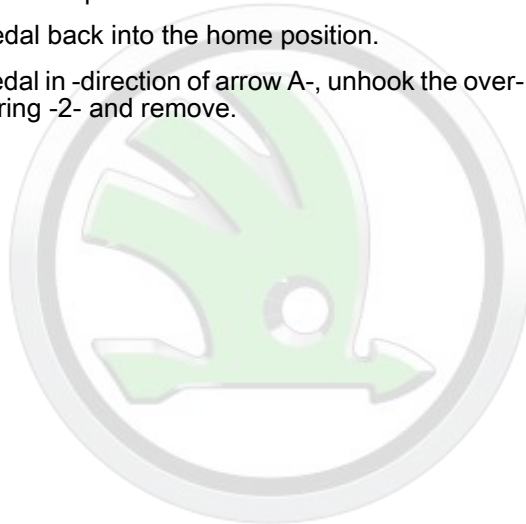
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- Press the catches -arrows- and detach the carrier bolt -1- of the master cylinder tappet to the right.



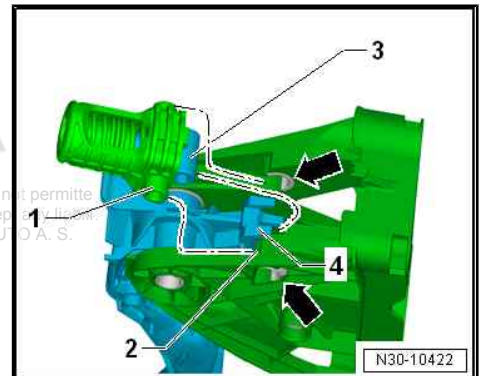
- If present, unhook the tension spring -1- and remove, while doing so pull the clutch pedal in -direction of arrow A-.
- Put the clutch pedal back into the home position.
- Pull the clutch pedal in -direction of arrow A-, unhook the over-centre helper spring -2- and remove.

Installing



Installation is performed in the reverse order, while paying attention to the following:

- The bearing shells -arrows- of the bolts -1- are installed.
- Pull the clutch pedal in -direction of arrow A- (⇒ previous figure) into the passenger compartment.
- Insert the bolt -1- into the mount -2- of the carrier.
- Insert the bearing -3- into the mount -4- for the clutch pedal.
- If the clutch pedal is pressed in -direction of arrow B- (⇒ previous figure), the over-centre helper spring springs in direction of carrier.
- Press the clutch pedal in -direction of arrow B- (⇒ previous figure), until the over-centre helper spring engages in direction of carrier.
- Connect the master cylinder tappet with the clutch pedal, to do so use a new carrier bolt.





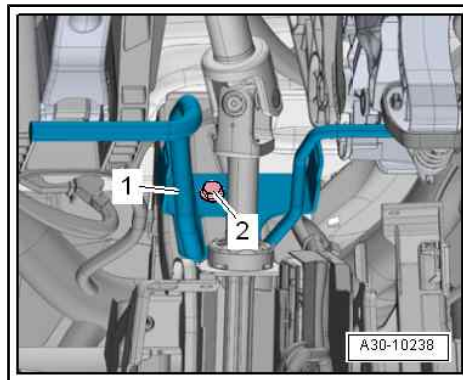
- Insert crash strut -1- and tighten screw -2- ⇒ General body repairs, interior; Rep. gr. 70 ; Cross member of dash panel; removing and installing crash strut .
- Install data bus diagnostic interface - J533- ⇒ Electrical System; Rep. gr. 97 ; Control units; Summary of components - data bus diagnostic interface .
- Install the footwell vent on the driver side ⇒ Heating system, air conditioning system; Rep. gr. 87 ; Air duct element; remove and install driver side footwell vent .

Vehicles with knee airbag

- If removed, install the knee airbag driver side ⇒ General body repairs interior ; Rep. gr. 69 ; Knee airbags; Remove and install knee airbag with igniter .

Vehicles without knee airbag

- Connect the battery ⇒ Electrical system; Rep. gr. 27 ; Battery; Disconnect and connect battery .



1.7 Remove and install the return spring

⇒ [“1.7.1 Removing and installing retractor spring, Octavia II”, page 30](#)

⇒ [“1.7.2 Removing and installing retractor spring, Octavia III”, page 32](#)

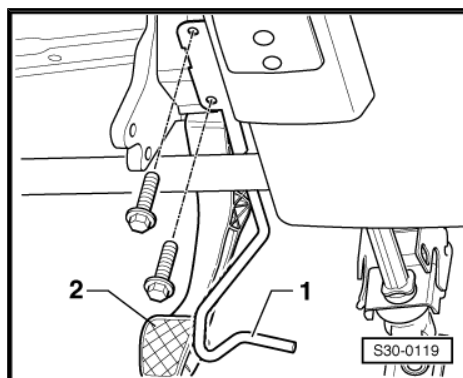
1.7.1 Removing and installing retractor spring, Octavia II

Special tools and workshop equipment required

- ◆ Release tool - T10178-

Removing

- Push the driver seat as far as possible towards the rear and position the steering wheel in the highest position.
- Remove lower part of the dash panel insert on the driver's side ⇒ Body; Rep. gr. 70 Work.
- Unscrew crash strut -1- in front of the clutch pedal -2-.



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- Unscrew clutch pedal -1- from bracket -3-, to this end release nut -2- and pull out screw -5-.

i Note

The clutch pedal remains hanging on the actuating rod of the clutch master cylinder.

- Swivel clutch pedal slightly downwards and remove retractor spring -4- from the bearing bracket.

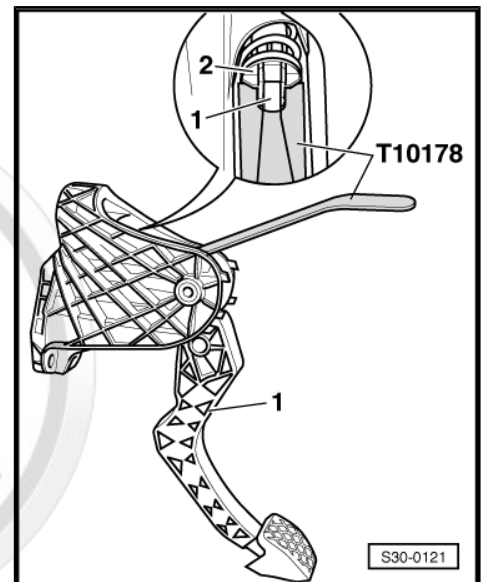
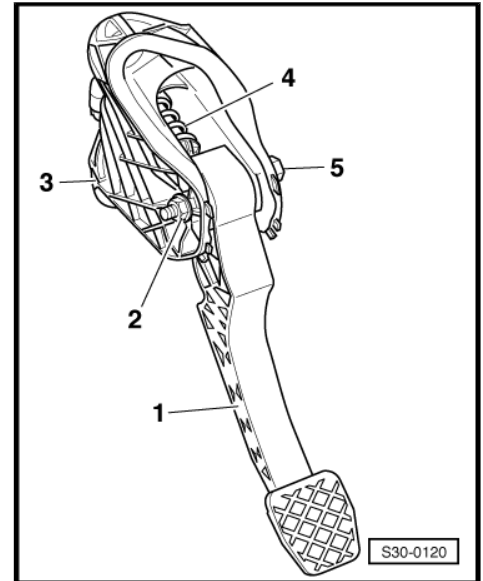
Installing

Installation is carried out in the reverse order. When installing, observe the following:

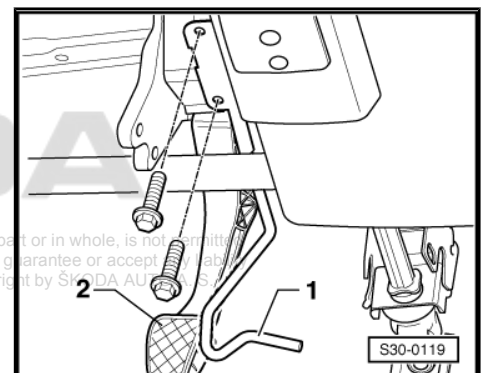
i Note

Replace self-locking nut.

- Insert retractor spring -2- from above into the bracket and while doing so hold the spring end in the fitting position using the release tool - T10178- .
- Insert bearing bolt of clutch pedal into the step bearing of the retractor spring.
- Press on clutch pedal -1- slightly, slide through screw and tighten self-locking nut.



- Screw on crash strut -1- in front of the clutch pedal -2-.
- Install lower part of the dash panel insert on the driver's side
⇒ Body Work; Rep. gr. 70 .



Tightening torques

Component	Tightening torque
Crash bar	9 Nm
Clutch pedal to bracket ¹⁾	⇒ page 15

¹⁾ Replace self-locking nut.

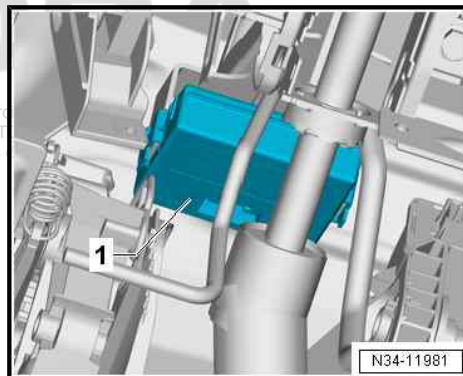
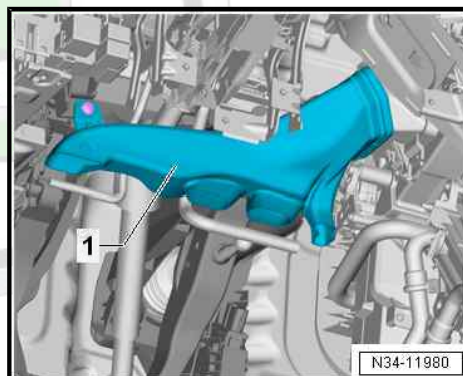
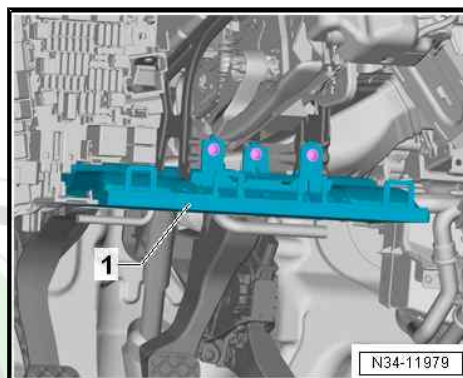
1.7.2 Removing and installing retractor spring, Octavia III

Removing

- With ignition switched off, disconnect battery earth strap ⇒ Electrical system; Rep. gr. 27 ; Battery; Disconnecting and connecting battery .
- Push the driver seat as far as possible towards the rear.
- Push steering wheel as far as possible towards the top, while doing so use the entire adjustment range of the steering column.

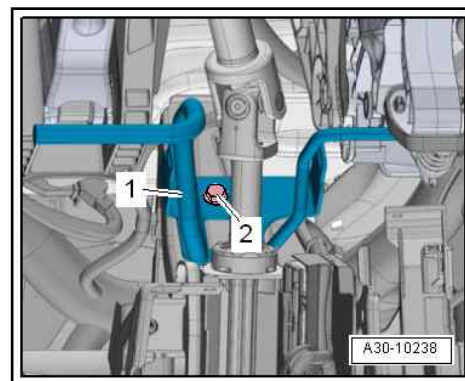
Vehicles with knee airbag

- Remove knee airbag -1- ⇒ Interior body work; Rep. gr. 69 ; Knee airbags; removing and installing knee airbag with ignition .
- Remove the footwell vent -1- on the driver side ⇒ Heating system, air conditioning system; Rep. gr. 87 ; Air duct element; remove and install driver side footwell vent .
- Remove data bus diagnostic interface - J533- -1- from bracket ⇒ Electrical System; Rep. gr. 97 ; Control units; Summary of components - data bus diagnostic interface and push to the side.

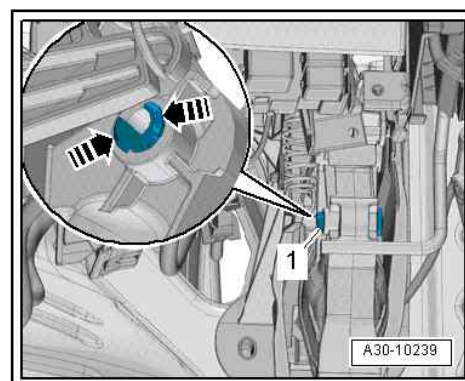


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- Unscrew screw -2-, unhook crash strut -1- and push it to the side.



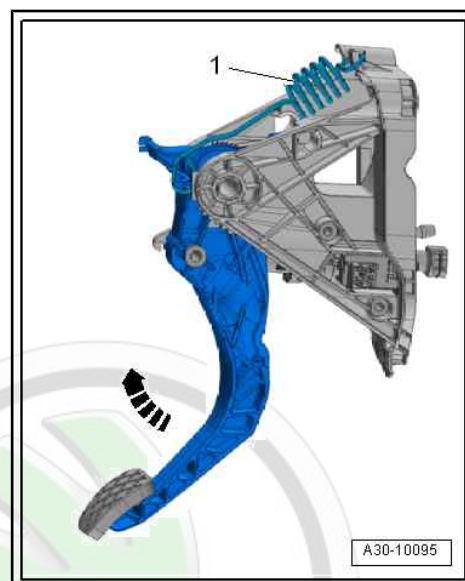
- Press the catches -arrows- and detach the carrier bolt -1- of the master cylinder tappet to the right.



- Swivel the clutch pedal in -direction of arrow-, unhook and remove retractor spring -1-.

Installing

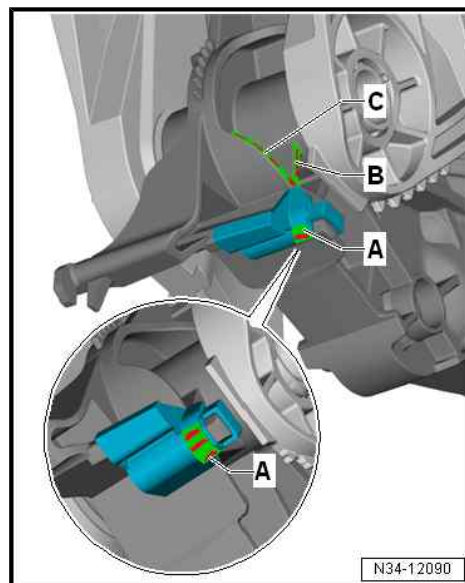
Installation is performed in the reverse order, while paying attention to the following:



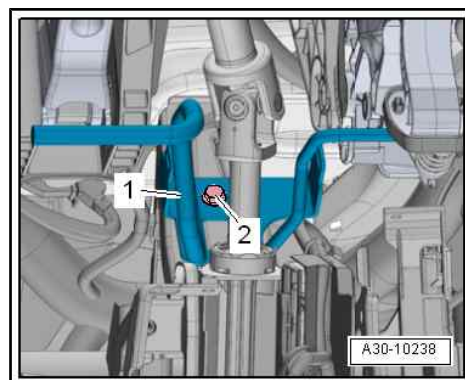
ŠKODA



- On the retractor spring -1- (⇒ previous image) only coat the following areas of the clutch pedal with grease -G 052 567 A2- :
 - Sliding sleeve in areas of bearing -A- for retractor spring
 - Peg -B-
 - Peg -C-
- Grease -G 052 567 A2- ⇒ Electronic Catalogue of Original Parts
- Swivel the clutch pedal in -direction of arrow- and suspend retractor spring -1- (⇒ previous fig.).
- Connect the master cylinder tappet with the clutch pedal, to do so use a new carrier bolt.



- Insert crash strut -1- and tighten screw -2- ⇒ General body repairs, interior; Rep. gr. 70 ; Cross member of dash panel; removing and installing crash strut .
- Install data bus diagnostic interface - J533- ⇒ Electrical System; Rep. gr. 97 ; Control units; Summary of components - data bus diagnostic interface .
- Install the footwell vent on the driver side ⇒ Heating system, air conditioning system; Rep. gr. 87 ; Air duct element; remove and install driver side footwell vent .



Vehicles with knee airbag

- Install knee airbag driver's side ⇒ General body repairs, interior; Rep. gr. 69 ; Knee airbags; removing and installing knee airbag with ignition .

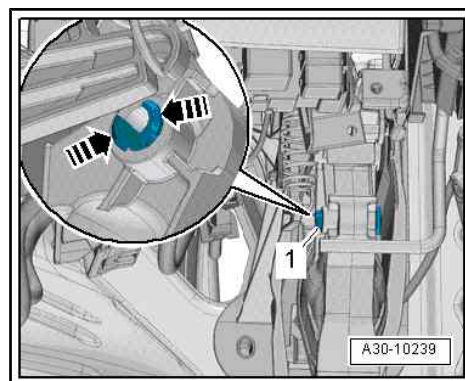
Vehicles without knee airbag

- Connect the battery ⇒ Electrical system; Rep. gr. 27 ; Battery; Disconnect and connect battery .

1.8 Removing and installing bearing bush

Removing

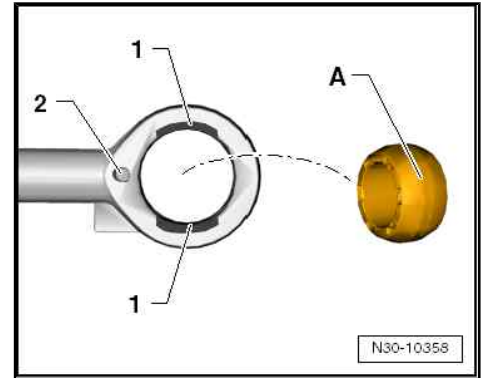
- With ignition switched off, disconnect battery earth strap ⇒ Electrical system; Rep. gr. 27 ; Battery; Disconnecting and connecting battery .
- Press the catches -arrows- together and remove the bolts -1- to the right.



- Turn the master cylinder tappet so that the recesses -1- and bolt -2- are visible.

The recesses -1- and bolt -2- are facing the same direction.

- Remove bearing bush -A- from recesses -1-.

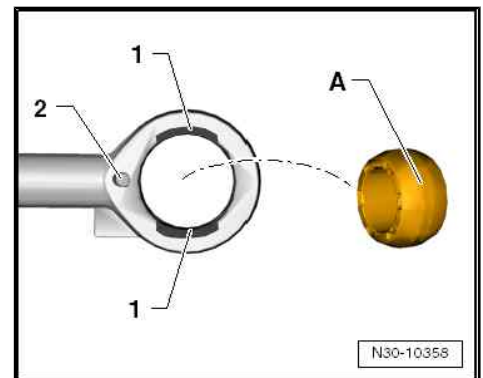


Installing

- Turn the master cylinder tappet so that the recesses -1- and bolt -2- are visible.

The recesses -1- and bolt -2- are facing the same direction.

- Fit the bearing bush -A- into the recesses -1- and turn it in the tappet lug until flush.
- Connect the master cylinder tappet with the clutch pedal, to do so use a new carrier bolt ⇒ Electronic catalogue of original parts .
- Connect the battery ⇒ Electrical system; Rep. gr. 27 ; Battery; Disconnect and connect battery .



1.9 Removing and installing the bearing bracket

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⇒ ["1.9.1 Removing and installing bearing bracket, Octavia II", page 35](#)

⇒ ["1.9.2 Removing and installing bearing bracket, Octavia III", page 38](#)

1.9.1 Removing and installing bearing bracket, Octavia II

Special tools and workshop equipment required

- ◆ Hose clamp - MP7-602 (3094)-

Removing



Note

If the battery earth strap is disconnected and connected, carry out additional operations ⇒ Electrical System; Rep. gr. 27 .

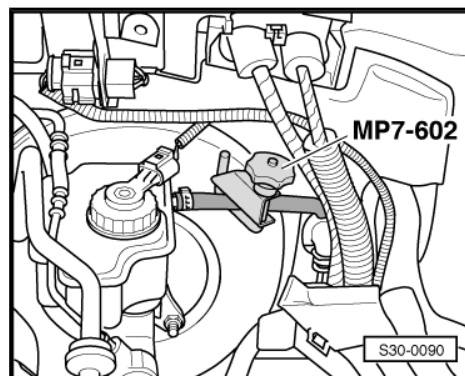
- Disconnect the battery-earth strap with the ignition off ⇒ Electrical System; Rep. gr. 27 .
- Remove air filter ⇒ Engine; Rep. gr. 24 .
- Remove battery and battery tray ⇒ Electrical System; Rep. gr. 27 .



Note

When performing the following work, make sure that no brake fluid comes into contact with the frame side rail or the gearbox. If this is the case, these points must be cleaned thoroughly.

- Pinch off return hose to master cylinder with hose clamp - MP7-602 (3094)- (if the return hose is made out of plastic, do not use the hose clamp - MP7-602- , otherwise the return hose can get damaged).



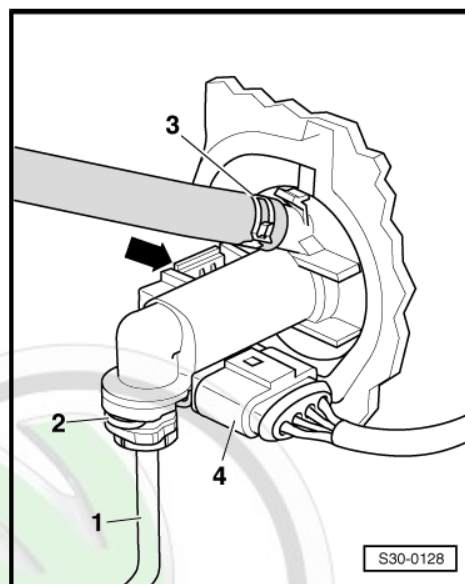
- Detach inlet hose -3- at master cylinder (detach plastic return hose -3- at master cylinder and close in a suitable manner).
- Unlock locking clip -2- with a screwdriver and detach tube-hose line -1- at master cylinder.
- Clip off clutch position sender - G476- at master cylinder -arrow- and remove with attached connector -4-.



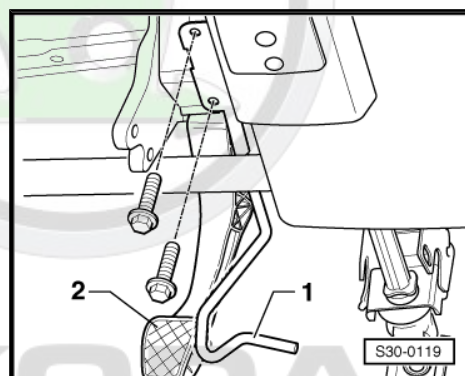
Note

When performing work in the footwell, put cloths on the floor covering to protect it from possible brake fluid spills.

- Remove lower part of the dash panel insert on the driver's side
⇒ Body; Rep. gr. 70 Work.



- Unscrew crash strut -1- in front of the clutch pedal -2-.



- Unscrew the nuts -2-.
- Remove bracket -1-.

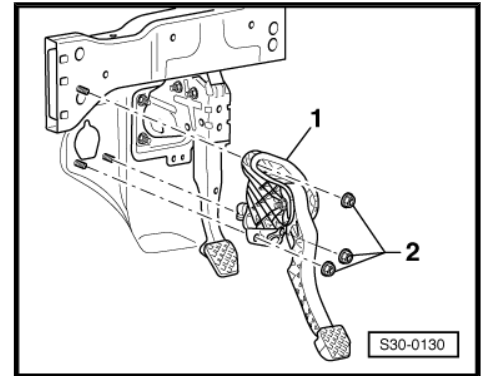
Installing

Installation is carried out in the reverse order. When installing, observe the following:

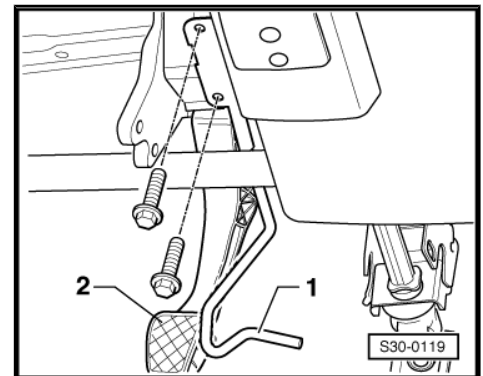


Note

- ◆ Replace self-locking nuts.
- ◆ Replace sealing rings.
- ◆ Replace hose clamps.



- Screw on crash strut -1- in front of the clutch pedal -2-.
- Install lower part of the dash panel insert on the driver's side
⇒ Body Work; Rep. gr. 70 .



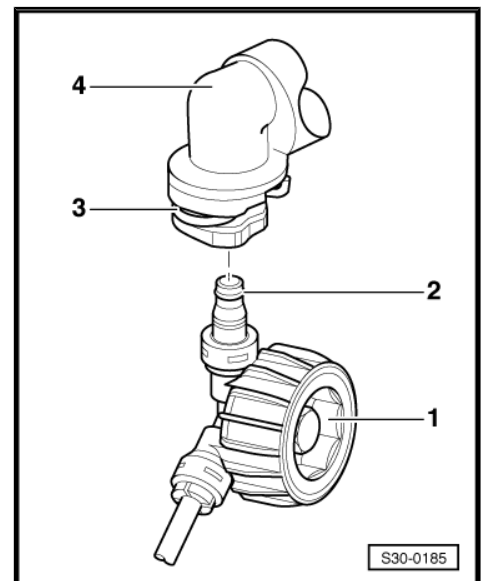
- Press in tube-hose line -1- with gasket ring -2- onto the connection of the master cylinder -4-, until the locking clip -3- is heard to click into position.
- For testing pull on the tube-hose line.
- Bleed the clutch control
⇒ [“1.13 Bleeding the clutch control”, page 49](#) .
- Install the battery tray and battery ⇒ Electrical System; Rep. gr. 27 .
- Install air filter ⇒ Engine; Rep. gr. 24 .



Note

After the battery earth strap is disconnected and connected, carry out additional operations ⇒ Electrical System; Rep. gr. 27 .

- Connect earth strap of battery ⇒ Electrical System; Rep. gr. 27 .



Tightening torques

Component	Tightening torque
Crash bar	9 Nm
Mounting bracket on the body ¹⁾	⇒ “1.2 Summary of components - Foot controls”, page 15

¹⁾ Replace self-locking nut.

1.9.2 Removing and installing bearing bracket, Octavia III

Special tools and workshop equipment required

- ◆ Hose clamp - MP7-602 (3094)-
- ◆ Closing tool - T10249-

Removing

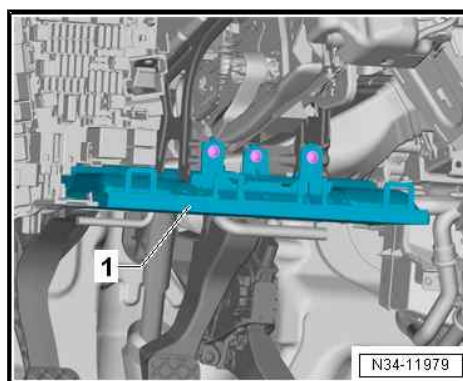
- Push the driver seat as far as possible towards the rear.
- Push steering wheel as far as possible towards the top, while doing so use the entire adjustment range of the steering column.

Vehicles with knee airbag

- Remove knee airbag -1- ⇒ Interior body work; Rep. gr. 69 ; Knee airbags; removing and installing knee airbag with ignition .

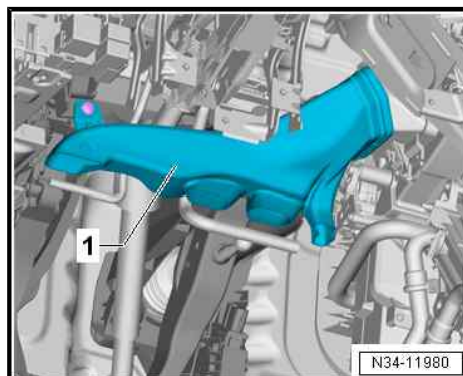
Vehicles without knee airbag

With ignition switched off, disconnect battery earth strap ⇒ Electrical system; Rep. gr. 27 ; Battery; Disconnecting and connecting battery .

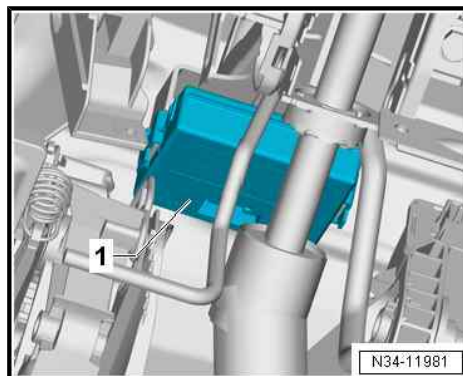


Continued for all versions

- Remove the footwell vent -1- on the driver side ⇒ Heating system, air conditioning system; Rep. gr. 87 ; Air duct element; remove and install driver side footwell vent .



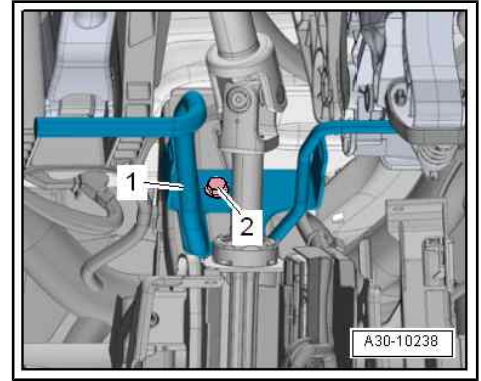
- Remove data bus diagnostic interface - J533- -1- from bracket ⇒ Electrical System; Rep. gr. 97 ; Control units; Summary of components - data bus diagnostic interface and push to the side.



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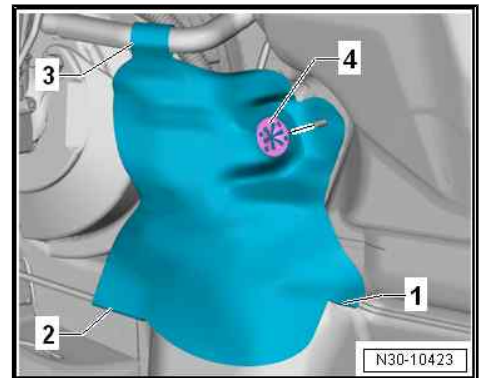
- Unscrew screw -2-, unhook crash strut -1- and push it to the side.
- Remove the complete air filter housing if the cables for the clutch control are not accessible.
 - ⇒ Rep. gr. 23 ; Air filter; Removing and installing air filter housing .
 - ⇒ Rep. gr. 24 ; Air filter; Removing and installing air filter housing .



Right-hand drive

A heat-protection matting is installed in combination with certain engines. The appearance may differ from the figure.

- Remove heat-protection matting. Pay attention to the positions -1...4-.



Left-hand drive

- Remove battery and battery tray ⇒ Electrical system; Rep. gr. 27 ; Battery; Removing and installing battery .

Continued for all versions



Caution

Risk of brake fluid escaping.

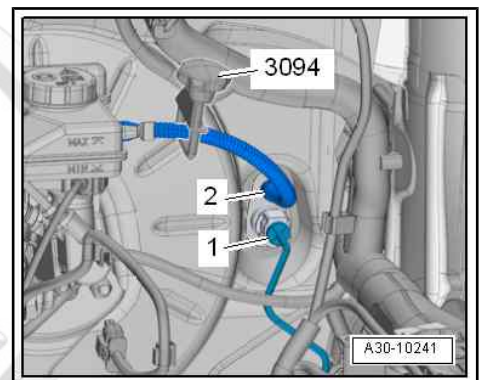
- ◆ **During the following work, ensure that no brake fluid lands on longitudinal member or gearbox. If this is the case, clean the affected area thoroughly.**
- ◆ **Lay a lint-free cloth under master cylinder.**

- Disconnect return hose -2- to master cylinder with hose clamp - MP7-602 (3094)- .



Note

- ◆ **If the return hose is clamped off with the hose clamp - MP7-602 (3094)- , it will be permanently deformed.**
- ◆ **Note that the supply hose is not defective.**
- ◆ **After removing the hose clamp - MP7-602 (3094)- , it may be necessary to bring the return hose back into its initial position.**
- Pull out the clip -3- at the tube-hose line up to the stop and detach the tube-hose line.
- Close the openings.

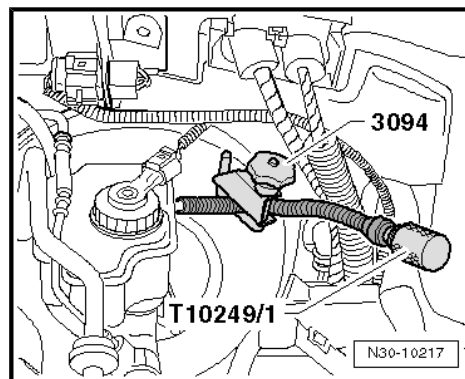


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- Detach the return hose -2- from the master cylinder and close with the sealing tool - T10249/1- .



Note

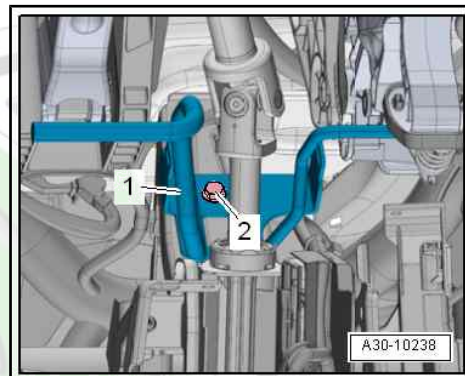
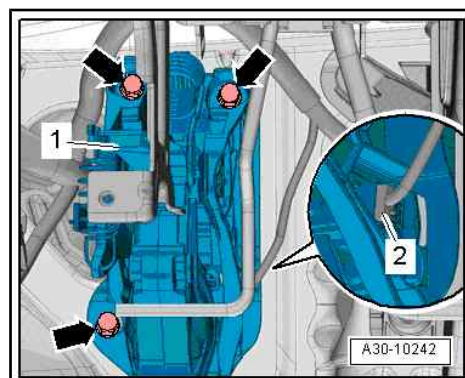
When working in the footwell, protect the underbody cover with cloths from escaping brake fluid.

- Disconnect the plug connection -2- at the clutch position sender - G476- .
- Unscrew nuts -arrows- and remove carrier -1-.

Installing

Installation is performed in the reverse order, while paying attention to the following:

- Replace self-locking nuts and gasket for master cylinder after removal.
- Insert crash strut -1- and tighten screw -2- ⇒ General body repairs, interior; Rep. gr. 70 ; Crossmember panel; removing and installing crashmember panel .
- Install diagnostic interface for data bus - J533- , remove battery and battery tray ⇒ Electrical system; Rep. gr. 27 ; Battery; Remove and install battery .
- Install the footwell vent on the driver side ⇒ Heating system, air conditioning system; Rep. gr. 87 ; Air duct element; remove and install driver side footwell vent .



Vehicles with knee airbag

- If removed, install the knee airbag driver side ⇒ General body repairs interior ; Rep. gr. 69 ; Knee airbags; Remove and install knee airbag with igniter .



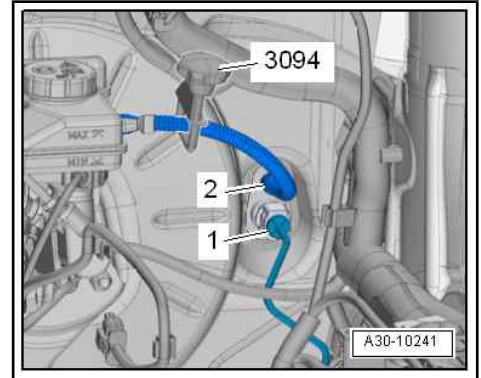
Note

The battery is not refitted and connected until later.

Continued for all versions

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- Connect tube-hose line -1- with connector ➔ [page 22](#) .
- Fit return hose -2- on master cylinder.
- After removing the hose clamp - MP7-602 (3094)- , it may be necessary to bring the return hose back into its initial position.



Right-hand drive

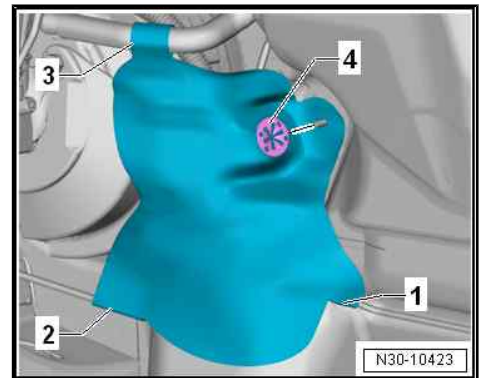
- If present, coil the heat-protection matting in the sequence -1, 2 and 3- around the cable.
- Secure the heat-protection matting with the circlip -4-.

Continued for all versions

- Bleed the clutch control
➔ [“1.13 Bleeding the clutch control”, page 49](#) .

Vehicles with knee airbag

- Install or connect battery ➔ Electrical system; Rep. gr. 27 ;
Battery; Removing and installing battery .



Tightening torques

- ◆ Bearing bracket for clutch pedal to bulkhead
➔ [“1.2 Summary of components - Foot controls”, page 15](#)

1.10 Removing and installing the master cylinder

➔ [“1.10.1 Removing and installing master cylinder, Octavia II”, page 41](#)

➔ [“1.10.2 Removing and installing master cylinder, Octavia III”, page 43](#)

1.10.1 Removing and installing master cylinder, Octavia II

Special tools and workshop equipment required

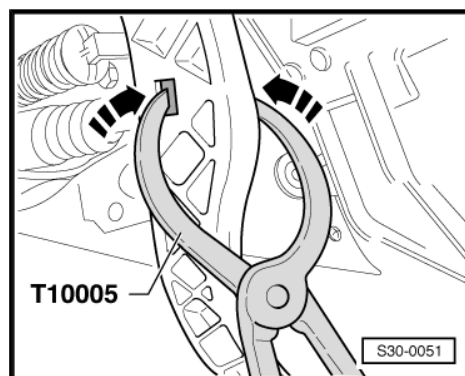
- ◆ Pliers - T10005-

Removing

- Removing bracket
➔ [“1.9 Removing and installing the bearing bracket”, page 35](#) .



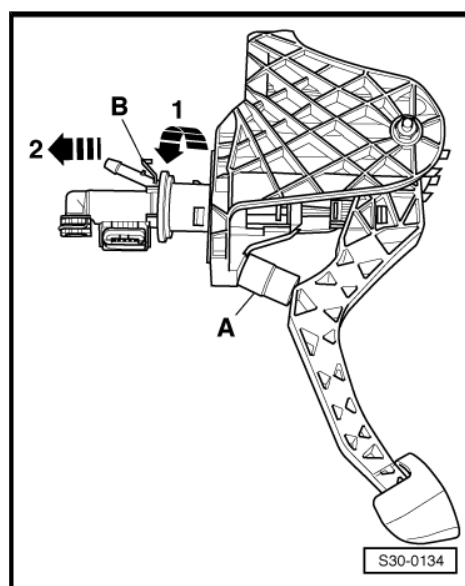
- Release support of actuating rod of master cylinder with the pliers - T10005- .



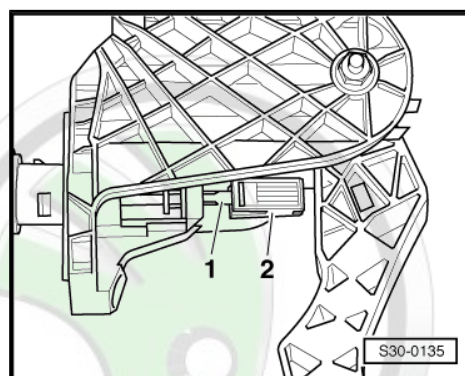
- Place a spacer -A- between clutch pedal and stop and press clutch pedal forwards.
- ◆ Length of spacer = approx. 40 mm
- Release release pin -B- and pull master cylinder out of bracket -arrow 1- and -arrow 2-.

Installing

- Move clutch pedal up to the stop into home position.



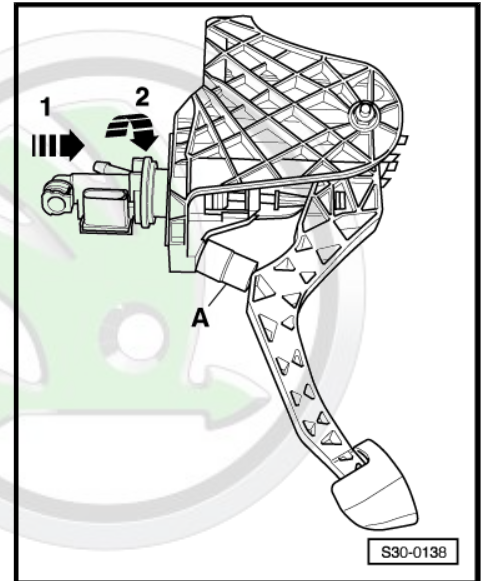
- Mount support -2- to the actuator rod -1- of the master cylinder.



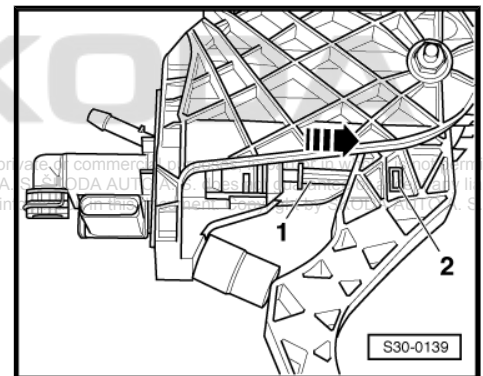
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- Place a spacer -A- between clutch pedal and stop and press clutch pedal into operating position.
- ◆ Length of spacer = approx. 40 mm
- Lock master cylinder at bracket -arrow 1- and -arrow 2-.



- Press actuating rod -1- of master cylinder into direction of arrow, until the support -2- locks audibly into the clutch pedal.
- Installing bracket
⇒ [“1.9 Removing and installing the bearing bracket”, page 35](#).



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1.10.2 Removing and installing master cylinder, Octavia III

Removing



Note

- ◆ *Before the master cylinder must be replaced due to a fault, first of all carry out the test in the Targeted fault finding ⇒ Vehicle diagnostic tester.*
- ◆ *When working in the footwell, protect the underbody cover with cloths from escaping brake fluid.*
- Remove bearing bracket for clutch pedal
⇒ [“1.9 Removing and installing the bearing bracket”, page 35](#).
- Remove clutch position sender - G476-
⇒ [“1.15 Removing and installing clutch position sender G476”, page 53](#).



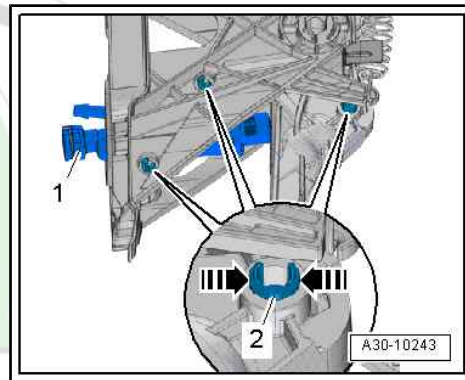
- Unlock catches -arrows- and push out carrier bolt -2-.
- Remove master cylinder -1-.

Installing

Installation is performed in the reverse order, while paying attention to the following:

Replace carrier bolt after removal.

- Install bearing bracket for clutch pedal
⇒ [“1.9 Removing and installing the bearing bracket”, page 35](#) .
- Install clutch position sender - G476-
⇒ [“1.15 Removing and installing clutch position sender G476”, page 53](#) .



1.11 Removing and installing the slave cylinder

⇒ [“1.11.1 Removing and installing slave cylinder, Octavia II”, page 44](#)

⇒ [“1.11.2 Removing and installing slave cylinder, Octavia III”, page 46](#)

1.11.1 Removing and installing slave cylinder, Octavia II

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Special tools and workshop equipment required

- ♦ Hose clamp - MP7-602 (3094)-
- ♦ Grease - G 000 100-



Note

- ♦ *If the slave cylinder must be replaced due to a predetermined fault, first of all check the hydraulic clutch control*
⇒ [“1.14 Checking the master and slave cylinder”, page 51](#) .
- ♦ *If the slave cylinder with the connected tube-hose line is removed from the gearbox, do no longer depress the clutch pedal. Otherwise, the piston can be pressed out of the slave cylinder and thus be destroyed.*
- ♦ *When performing the following work, make sure no brake fluid comes into contact with the gearbox. If this is the case. these points must be cleaned thoroughly.*

Removing



Note

If the battery earth strap is disconnected and connected, carry out additional operations ⇒ Electrical System; Rep. gr. 27 .

- Disconnect the battery-earth strap with the ignition off ⇒ Electrical System; Rep. gr. 27 .
- Remove air filter ⇒ Engine; Rep. gr. 24 .
- Remove battery and battery tray ⇒ Electrical System; Rep. gr. 27 .

- Remove lock washer -arrow 1- for shift cable from gearbox shift lever -A-.

Vehicles up to 05.2007 (metal relay lever)

- Remove circlip -arrow 2- for selector cable from relay lever -B-.
- Remove selector cable and shift cable from the studs.
- Detach circlip -arrow 3- from the relay lever -B- and remove relay lever.

Vehicles from 06.2007 (plastic relay lever)

- Pull off the shift cable from the stud.
- Remove relay lever together with cable lock
⇒ [“1.8 Repairing shift mechanism”, page 92](#) .

Continued for all vehicles

- Remove the gearshift lever -A-, for this step unscrew nut -arrow 4-.
- Disconnect the Bowden cable support from gearbox -arrows-.
- Tie up shift cable and selector cable.
- Lay a lint-free cloth under slave cylinder.



Note

Make sure no brake fluid comes into contact with the gearbox. If this is the case, this point must be cleaned thoroughly.

- Pinch off the tube-hose line to the master cylinder with the hose clamp - MP7-602 (3094)- (if the tube-hose line to the master cylinder is made out of plastic, do not use the hose clamp - MP7-602-).
- Pull retaining clip -A- for tube-hose line out of the slave cylinder up to the stop.
- Pull tube-hose line out of the support -C-.
- Pull tube-hose line -B- out of the slave cylinder and close opening.
- Unscrew slave cylinder -arrows- and take out.



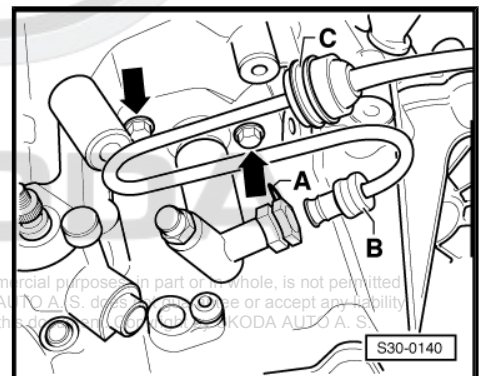
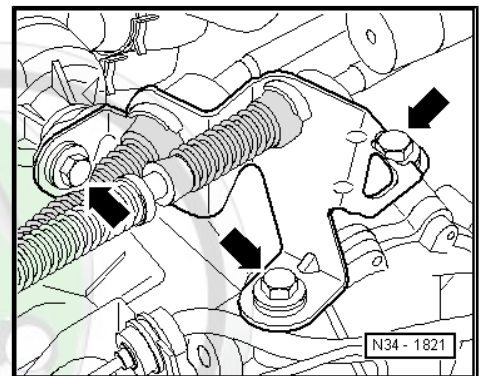
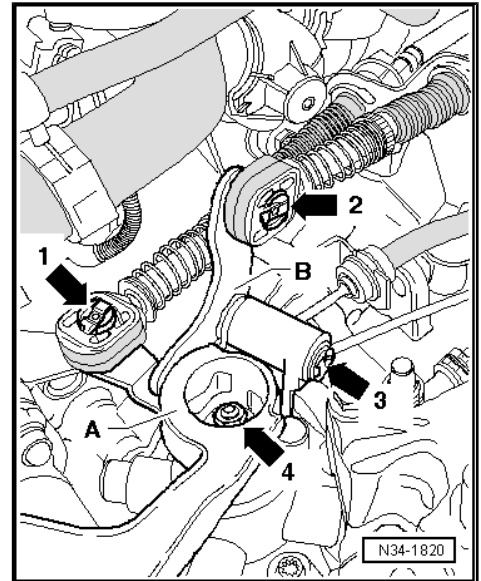
Note

Do not depress the clutch pedal.

Installing

Installation is performed in the reverse order, pay attention to the following points:

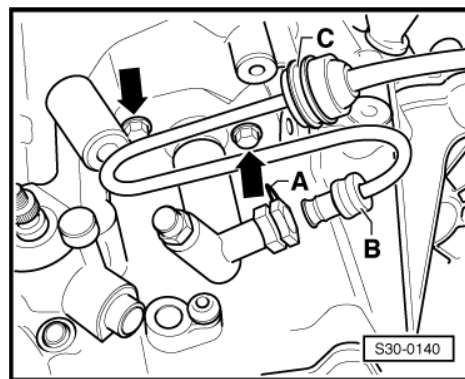
- Grease tappet head with grease - G 000 100- .



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- Install slave cylinder and tighten screws -arrows- to the given tightening torque.
- Insert tube-hose line -B- into the slave cylinder up to the stop.
- Press in retaining clip -A- for attaching the tube-hose line up to the stop.
- Press tube-hose line up to the stop into the support -C- at the gearbox.
- After installing the slave cylinder bleed the clutch control
⇒ [“1.13 Bleeding the clutch control”, page 49](#) .



Assembling gearshift mechanism

⇒ [“1.8 Repairing shift mechanism”, page 92](#) .

Setting the shift mechanism

⇒ [“1.9 Setting the shift mechanism”, page 97](#) .

- Install air filter ⇒ Engine; Rep. gr. 24 .
- Connect earth strap of battery ⇒ Electrical System; Rep. gr. 27 .

Tightening torque

Component	Tightening torque
Slave cylinder to gearbox	⇒ “1.3 Assembly overview - clutch hydraulics”, page 18
Cable support to gearbox	⇒ “1.4 Summary of components - shift lever and shift housing”, page 74 or ⇒ “1.5 Summary of components - control cables”, page 80
Gearbox shift lever to gearbox	⇒ “1.4 Summary of components - shift lever and shift housing”, page 74

1.11.2 Removing and installing slave cylinder, Octavia III

Special tools and workshop equipment required

- ◆ Hose clamp - MP7-602 (3094)-
- ◆ Grease - G 000 100-

Removing



Note

- ◆ *Before the master cylinder must be replaced due to a fault, first of all carry out the test in the [Targeted fault finding](#) ⇒ Vehicle diagnostic tester.*
- ◆ *If the slave cylinder with the tube-hose line is removed from the gearbox, do no longer depress the clutch pedal. Otherwise, the piston can be pressed out of the slave cylinder and thus be destroyed.*
- Remove battery and battery tray ⇒ Electrical system; Rep. gr. 27 ; Battery; Removing and installing battery tray .

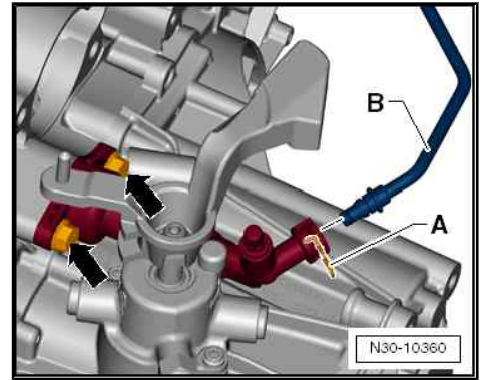
- Lay a lint-free cloth under slave cylinder.
- Unlock the clip -A- with a screwdriver and disconnect the tube-hose line -B- from the connection.
- Pull tube-hose line -B- out of the slave cylinder and close openings.
- Unscrew screws -arrows- and remove slave cylinder.



Caution

There is a risk of contamination through escaping brake fluid.

- ◆ *If the tube-hose line is disconnected from the connection, do no longer depress the clutch pedal.*



Installing

Installation is performed in the reverse order, while paying attention to the following:



Note

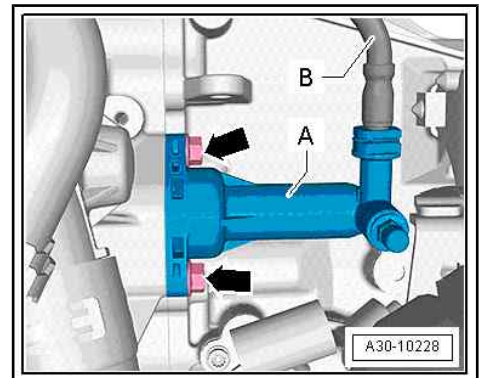
- ◆ Grease all bearing points and contact surfaces with grease.
- ◆ Assignment grease ⇒ *Electronic Catalogue of Original Parts*.

Fit slave cylinder -A- and tighten screws -arrows-.

- Connect tube-hose line -B- ⇒ [page 22](#).
- Bleed the clutch control
⇒ [“1.13 Bleeding the clutch control”, page 49](#).
- Install battery tray and battery ⇒ Electrical system; Rep. gr. 27 ; Battery; Removing and installing battery tray.

Tightening torque

- ◆ Slave cylinder to gearbox
⇒ [“1.4 Assembly overview - clutch release mechanism”, page 23](#).



1.12 Removing and installing cables for clutch control

Special tools and workshop equipment required

- ◆ Hose clamp - MP7-602 (3094)-

Removing

- Remove the complete air filter housing if the cables for the clutch control are not accessible.
⇒ Rep. gr. 23 ; Air filter; Removing and installing air filter housing .
⇒ Rep. gr. 24 ; Air filter; Removing and installing air filter housing .
- Remove battery and battery tray ⇒ Electrical system; Rep. gr. 27 ; Battery; Removing and installing battery tray .



Right-hand drive

A heat-protection matting is installed in combination with certain engines. The appearance may differ from the figure.

- Remove heat-protection matting. Pay attention to the positions -1...4-.

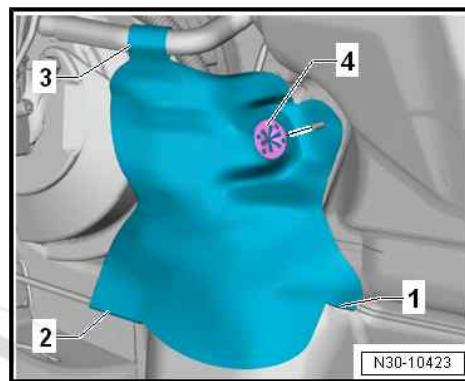
Continued for all versions



Caution

Risk of brake fluid escaping.

- ◆ *During the following work, ensure that no brake fluid lands on longitudinal member or gearbox. If this is the case, clean the affected area thoroughly.*
- ◆ *Lay a lint-free cloth under master cylinder.*

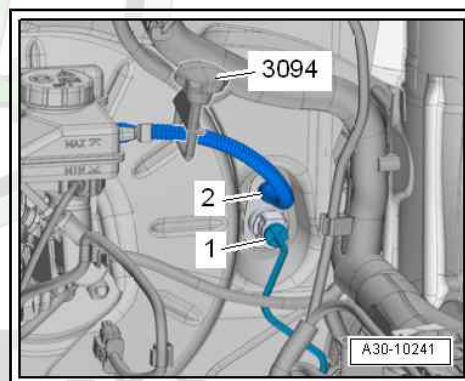


- Disconnect return hose -2- to master cylinder with hose clamp - MP7-602 (3094)- .



Note

- ◆ *If the return hose is clamped off with the hose clamp - MP7-602 (3094)- , it will be permanently deformed.*
- ◆ *Note that the supply hose is not defective.*
- ◆ *After removing the hose clamp - MP7-602 (3094)- , it may be necessary to bring the return hose back into its initial position.*



- Pull the clip at the tube-hose line out of the master cylinder up to the stop and detach the tube-hose line.

- Close the openings.

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- Pull out the clip -A- up to the stop and detach the tube-hose line -B- to the master cylinder.

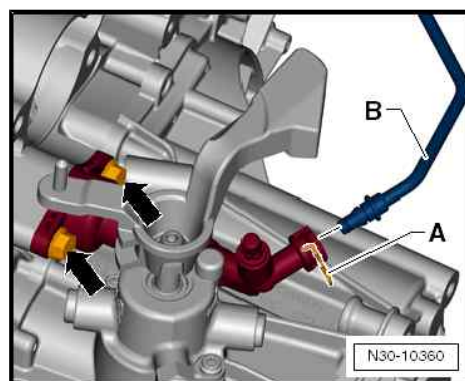
- Close the openings.



Note

Ignore -arrows-.

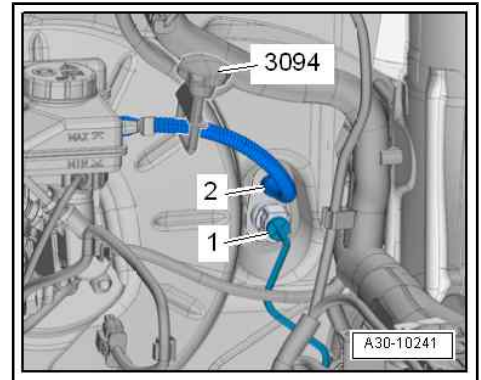
- Close the open lines and connections, if necessary with a clean plug from the plug set for engine - VAS 6122- .
- Loosen tube-hose line and remove.



Installing

Installation is performed in the reverse order, while paying attention to the following:

- Connect the tube-hose line -1- with connectors at the master cylinder and at the slave cylinder.
- For checking, pull on the line.
- After removing the hose clamp - MP7-602 (3094) -, it may be necessary to bring the return hose -2- back into its initial position.

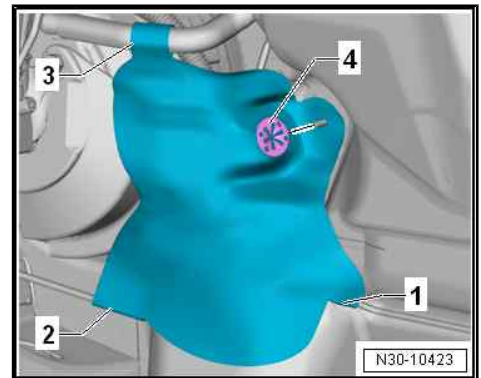


Right-hand drive

- If present, coil the heat-protection matting in the sequence -1, 2 and 3- around the cable.
- Secure the heat-protection matting with the circlip -4-.

Continued for all versions

- Bleed the clutch control
⇒ [“1.13 Bleeding the clutch control”, page 49](#) .
- Install battery tray and battery ⇒ Electrical system; Rep. gr. 27 ; Battery; Removing and installing battery tray .



1.13 Bleeding the clutch control

⇒ [“1.13.1 Bleeding the clutch control, Octavia II”, page 49](#)

⇒ [“1.13.2 Bleeding the clutch control, Octavia III”, page 50](#)

1.13.1 Bleeding the clutch control, Octavia II

Special tools and workshop equipment required

- ◆ Brake filling and bleeding device , e.g. -VAS 5234- or -ROM-ESS-



Note

- ◆ *When performing the following work, make sure that no brake fluid comes into contact with the frame side rail or the gearbox.*
- ◆ *Pre-filling of the system is not necessary!*

Brake fluid specification ⇒ Chassis; Rep. gr. 00 .

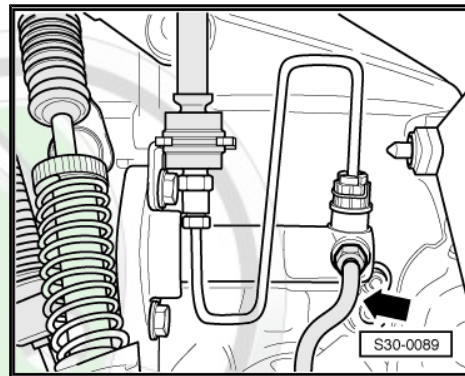
- Remove air filter ⇒ Engine; Rep. gr. 24 .
- Connect the brake filling and bleeding device.

To bleed use the bleeder hose.

- Then connect ventilation hose with the drip bottle of the brake bleeding device.



- Fit the bleeder hose onto the vent valve -arrow-.
- Activate system with a pressure of 0.2 MPa.
- Open vent valve.
- Allow approx. 100 cm³ of brake fluid to flow out.
- Close vent valve.
- Activate pedal forcefully from stop to stop between 10 and 15 times.
- Activate system with a pressure of 0.2 MPa.
- Open vent valve.
- Allow approx. 50 cm³ more brake fluid to flow out.
- Close vent valve.
- After completing the bleeding procedure activate the clutch pedal repeatedly.
- If necessary, bleed the clutch control once again
⇒ ["1.13 Bleeding the clutch control", page 49](#) .
- Install air filter ⇒ Engine; Rep. gr. 24 .



1.13.2 Bleeding the clutch control, Octavia III

Special tools and workshop equipment required

- ◆ Brake filling and bleeding device , e.g. -VAS 5234- or -ROM-ESS-



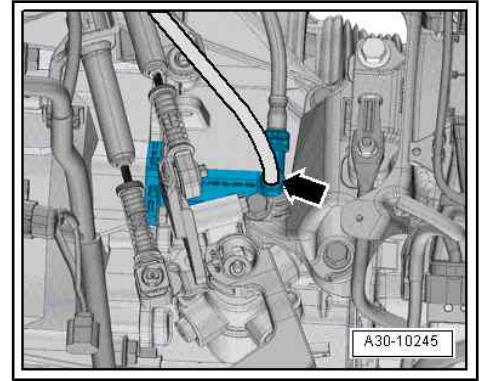
Note

- ◆ *The system must be bled after performing work on the hydraulic clutch control.*
- ◆ *When performing the following work, make sure no brake fluid comes into contact with the gearbox.*
- ◆ *Pre-filling of the system is not necessary!*
- ◆ *Before bleeding, fill brake fluid reservoir up to "max" marking with brake fluid.*
- ◆ *Clutch pedal in home position, not operated.*
- ◆ *Specification of brake fluid ⇒ Electronic catalogue of original parts .*
- Remove the complete air filter housing if the cables for the clutch control are not accessible.
 - ⇒ Rep. gr. 23 ; Air filter; Removing and installing air filter housing .
 - ⇒ Rep. gr. 24 ; Air filter; Removing and installing air filter housing .

- Put the clutch pedal in home position.
- Remove cap from vent valve -arrow-.
- Connect the brake filling and bleeding device - VAS 5234- or -V.A.G 1869- .
- Fit on bleeder hose and connect to pressure hose of drip bottle.

To bleed system, use 670 mm bleeder hose - V.A.G 1238/B3- if necessary.

- Switch on brake filling and bleeding device .
- Working pressure: 2.0 bar.
- Open vent valve.
- Allow approx. 100 cm³ of brake fluid to flow out.
- Close vent valve.
- Rapidly operate clutch pedal from stop to stop 10 to 15 times.
- Open vent valve.
- Allow approx. 50 cm³ more brake fluid to flow out.
- Close vent valve.
- Switch off brake filling and bleeding device and release all of the pressure from the device.
- After completing the bleeding procedure, press the clutch pedal repeatedly.
- At the same time check the operation of the clutch control.



Tightening torque

- ◆ Vent valve
⇒ ["1.3 Assembly overview - clutch hydraulics", page 18](#)

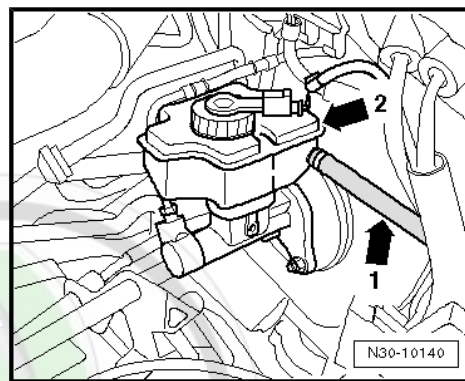
1.14 Checking the master and slave cylinder

Before the master cylinder must be replaced due to a fault, first of all carry out the test in the Targeted fault finding ⇒ Vehicle diagnostic tester.



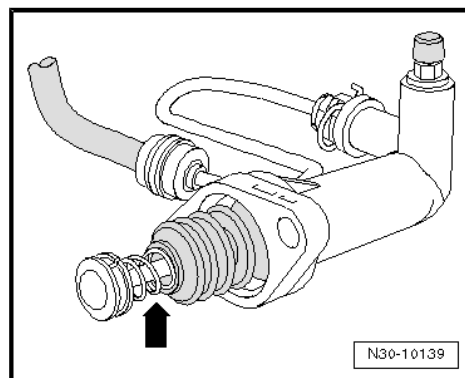
Note

- ◆ If the master cylinder and/or slave cylinder must be replaced due to the predetermined fault, first of all check the hydraulic clutch control.
- ◆ If the slave cylinder with the connected tube-hose line is removed from the gearbox, do no longer depress the clutch pedal. Otherwise, the piston can be pressed out of the slave cylinder and thus be destroyed.
- ◆ The clutch hydraulic is connected to one of the chambers -arrow 2- of the brake fluid reservoir by the return hose -arrow 1-.
- ◆ If there is little or no brake fluid in this chamber, there is a leak in the system.
- ◆ Symptoms of an external leak are, amongst others, traces of brake fluid on or below the gearbox, as well as on the noise insulation under the gearbox.
- ◆ In case of leakage, the corresponding component must be replaced.
- ◆ Check the correct routing of the tube-hose line between the master and slave cylinder. The line must not be kinked or trapped.
- ◆ The brake pedal return must not be obstructed by moved or additional covers (floor coverings).



Inspect the complete hydraulic system for leaks.

- Carry out a visual inspection of the following components of the hydraulic clutch control for leaks:
 - ◆ Check brake fluid level in the brake fluid reservoir.
 - ◆ Return hose between brake fluid reservoir and master cylinder.
 - ◆ Master cylinder.
 - ◆ Tube-hose line between master cylinder and slave cylinder.
 - ◆ Connection points (plug and screw connections) also in a non-visible area.
 - ◆ Slave cylinder.
- Remove the slave cylinder (do not open the line system) and check if no brake fluid drips out of the bellows, to do so remove the bellows from the rod -arrow-.
- Bleed the clutch control if necessary
⇒ ["1.13 Bleeding the clutch control", page 49](#) .
- Then depress the clutch pedal carefully, at the same time hold the pedal in five different positions for approx. 20s over the entire distance the pedal has to travel and check that the pedal does not fall through on its own while being held (in five positions). While doing so, a second mechanic must check if fluid is leaking from the other components of the hydraulic clutch control ⇒ [page 52](#) .



1.15 Removing and installing clutch position sender - G476-

⇒ "1.15.1 Removing and installing clutch position sender G476 , Octavia II", page 53

⇒ "1.15.2 Removing and installing clutch position sender G476 , Octavia III", page 54

1.15.1 Removing and installing clutch position sender - G476- , Octavia II

Special tools and workshop equipment required

- ◆ Hose clamp - MP7-602 (3094)-

Removing



Note

If the battery earth strap is disconnected and connected, carry out additional operations ⇒ Electrical System; Rep. gr. 27 .

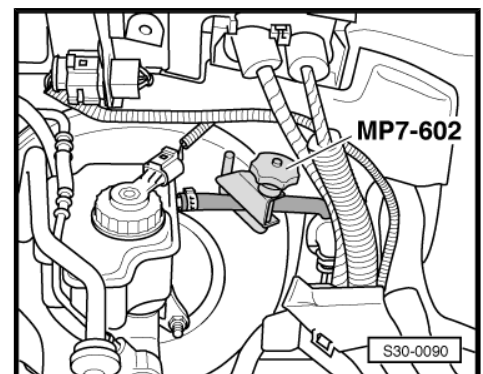
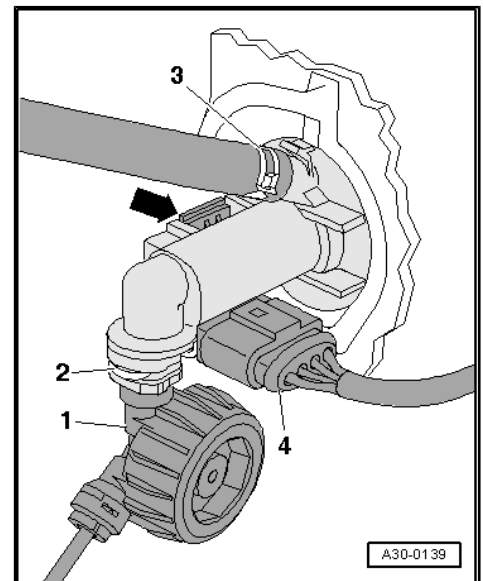
- Disconnect the battery-earth strap with the ignition off ⇒ Electrical System; Rep. gr. 27 .
- Remove air filter ⇒ Engine; Rep. gr. 24 .
- Remove battery, battery cover and battery tray ⇒ Electrical System; Rep. gr. 27 .

If the round piece of the tube-hoseline -1- is directly installed underneath the master cylinder, this line must be removed.



Note

When performing the following work, make sure that no brake fluid comes into contact with the frame side rail or the gearbox. If this is the case, these points must be cleaned thoroughly.



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- Pinch off return hose to master cylinder with hose clamp - MP7-602 (3094)- (if the return hose is made out of plastic, do not use the hose clamp - MP7-602- , otherwise the return hose can get damaged).



- Detach inlet hose -3- at master cylinder (detach plastic return hose -3- at master cylinder and close in a suitable manner).
- Unlock locking clip -2- with a screwdriver and detach tube-hose line -1- at master cylinder.
- Clip off clutch position sender - G476- at master cylinder -arrow- and remove with attached connector -4-.

Installing

Installation is performed in the reverse order, pay attention to the following points:



Note

- ◆ Replace sealing rings.
- ◆ Secure all hose connections with hose clamps that comply with the series design.

If the tube-hose line was removed:

- After installing the tube-hose line, pull on this line for checking.
- Bleed the clutch control
⇒ ["1.13 Bleeding the clutch control", page 49](#) .
- Install the battery tray and battery ⇒ Electrical System; Rep. gr. 27 .
- Install air filter ⇒ Engine; Rep. gr. 24 .



Note

After the battery earth strap is disconnected and connected, carry out additional operations ⇒ Electrical System; Rep. gr. 27 .

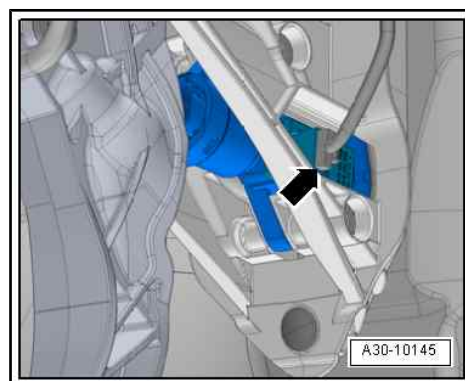
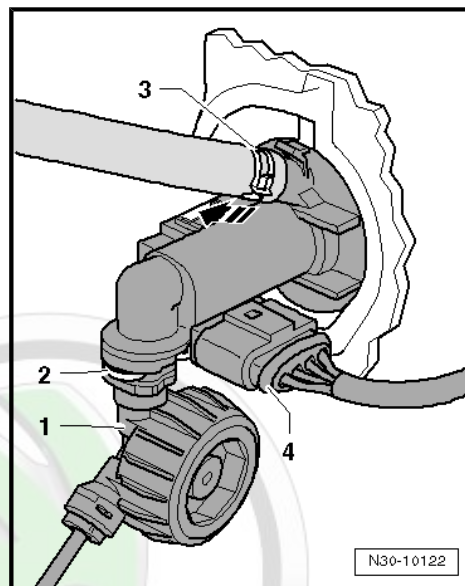
- Connect earth strap of battery ⇒ Electrical System; Rep. gr. 27 .

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1.15.2 Removing and installing clutch position sender - G476- , Octavia III

Removing

- Push the driver seat as far as possible towards the rear.
- Disconnect the plug connection -arrow- at the clutch position sender - G476- .

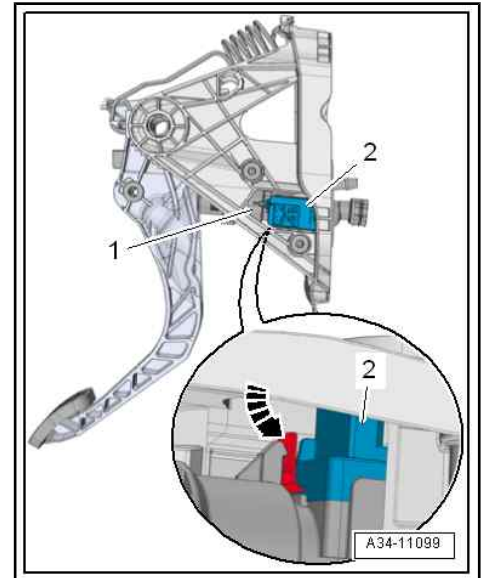


- Unlock catch -arrow- of clutch position sender - G476- -2- at master cylinder -1- and remove.

Installing

Installation is performed in the reverse order, while paying attention to the following:

- The detent -arrow- on the clutch position sender - G476- must be undamaged.
- The clutch position sender - G476- must click audibly into place.



1.16 Repairing the clutch release mechanism

Special tools and workshop equipment required

- ◆ Grease - G 000 100-
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- Gearbox removed.

Removing and installing clutch release lever -A- with release bearing and guide sleeve

Removing

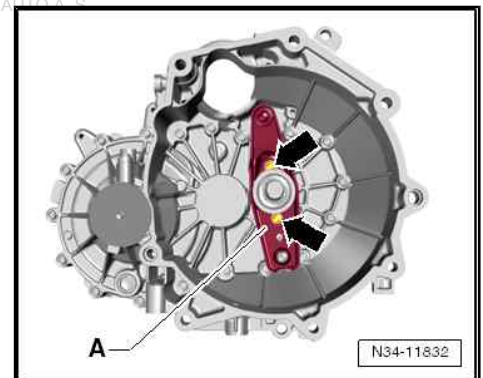
- Remove screws -arrows-.
- Pull clutch release lever with release bearing and guide bushing off input shaft and ball stud.

Installing

Installation is carried out in the reverse order.

Tightening torque

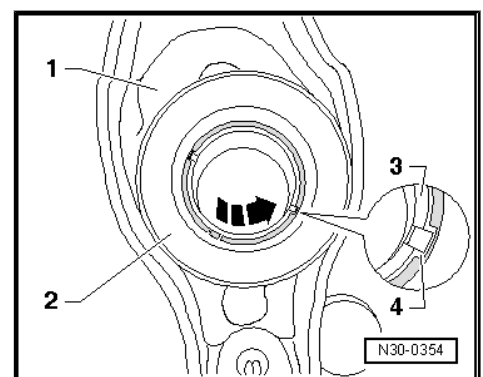
- Guide bushing to gearbox
⇒ [“2.1 Assembly overview - clutch”, page 57](#) .



Remove and install guide bushing from the release bearing

Removing

- Remove the clutch release lever together with the clutch release bearing and the guide bushing ⇒ [page 55](#) .
- Push guide bushing -3- toward top out of the release bearing -2-.
- Rotate the guide bushing -3- opposite the release bearing -2- by approx. 90° in the -direction of the arrow- until the catch pegs of the guide bushing are aligned with the slots -4- of the release bearing.
- In this position remove the guide bushing from the release bearing.



Installing

Installation is carried out in the reverse order.

- Install the clutch release lever together with the release bearing and guide bushing ⇒ [page 55](#) .



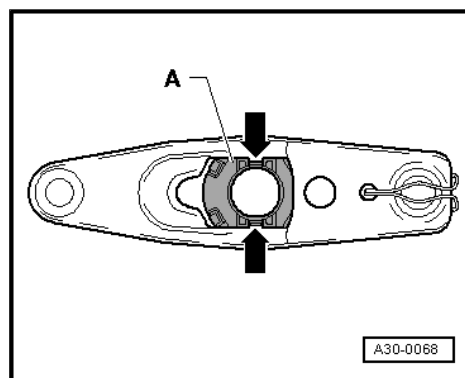
Removing and installing release bearing

Removing

- Remove the clutch release lever together with the clutch release bearing and the guide bushing ⇒ [page 55](#) .
- Push together the catch pegs -arrows- on the back of the clutch release lever and remove the release bearing -A- from the clutch release lever.

Installing

- Press the release bearing -A- into the clutch release lever until the catch pegs -arrows- lock into position.
- Grease contact surface on the clutch release lever with grease - G 000 100- .
- Install the clutch release lever together with the release bearing and guide bushing ⇒ [page 55](#) .



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2 Clutch

⇒ [“2.1 Assembly overview - clutch”, page 57](#)

2.1 Assembly overview - clutch

⇒ [“2.1.1 Summary of components - clutch, Octavia II”, page 57](#)

⇒ [“2.1.2 Summary of components - clutch, Octavia III”, page 58](#)

2.1.1 Summary of components - clutch, Octavia II

1 - Flywheel

- ☐ make sure the centering pins are correctly fitted
- ☐ The contact surface for the clutch lining must be free of grooves, oil and grease
- ☐ Removing and Installing
⇒ Engine; Rep. gr. 13

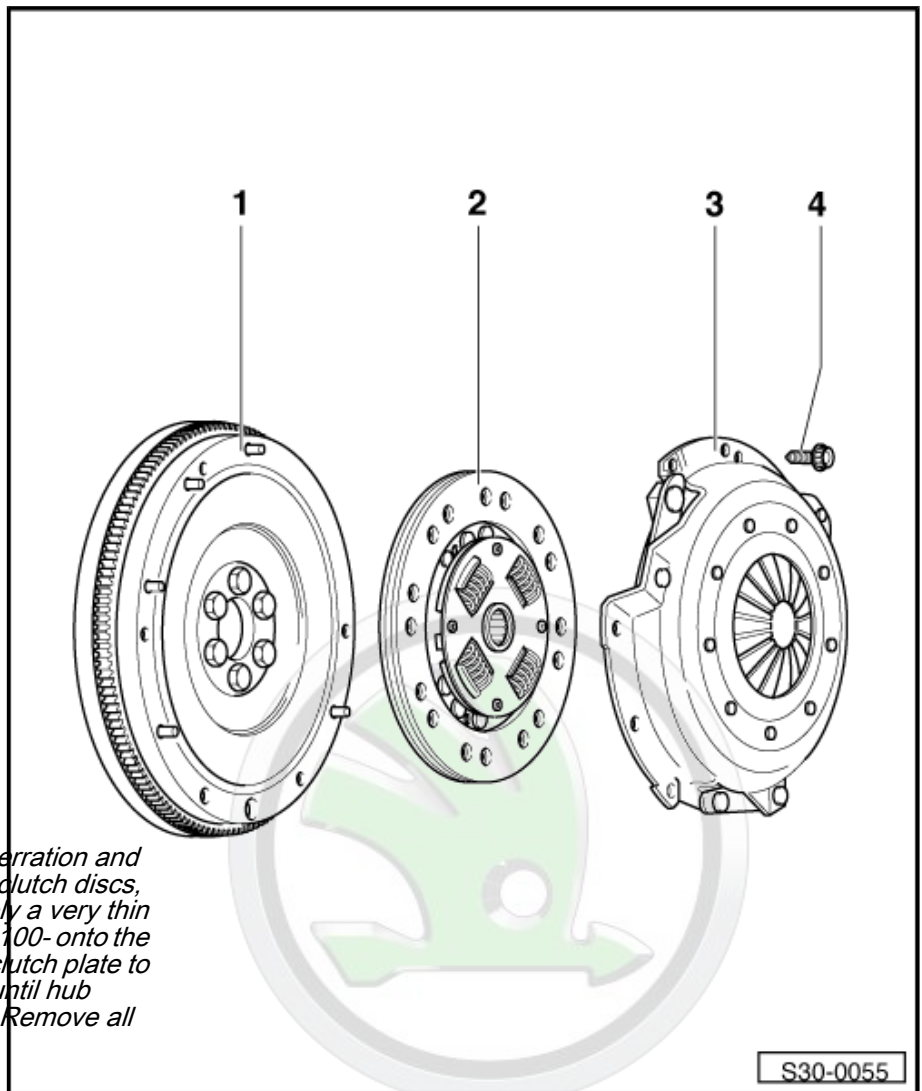
2 - Clutch disc

- ☐ Assignment ⇒ Electronic Catalogue of Original Parts
- ☐ Installation position: the spring cage points towards the pressure plate
- ☐ centering, vehicles with 1.4 ltr. engine
⇒ [page 59](#)
- ☐ centering, vehicles with 1.6 ltr. engine
⇒ [page 60](#)
- ☐ Lightly grease splines



Note

Clean the drive shaft serration and hub serration on used clutch discs, remove corrosion. Apply a very thin layer of grease - G 000 100- onto the serration. Then move clutch plate to and fro on input shaft until hub moves freely on shaft. Remove all excess grease.



3 - Thrust washer

- ☐ removing and installing, vehicles with 1.4 ltr. engine ⇒ [page 59](#)
- ☐ removing and installing, vehicles with 1.6 ltr. engine ⇒ [page 60](#)
- ☐ Check ends of diaphragm spring ⇒ [page 60](#)



Note

The clutch plates are protected against corrosion and greased. Only clean the thrust surface as otherwise the life of the clutch may be considerably reduced.

4 - Screw

- ☐ loosen or tighten gradually and crosswise
- ☐ assign according to the → Electronic catalogue of original parts .
- ☐ Tightening torque:

◆ M6: 13 Nm

◆ M7: 20 Nm

2.1.2 Summary of components - clutch, Octavia III

1 - Flywheel

- ☐ removing and installing
⇒ Rep. gr. 13 ; Cylinder block gearbox side; removing and installing flywheel
- ☐ Ensure that centring pins fit tightly
- ☐ Keep contact surface for clutch lining free of grooves, oil and grease

2 - Clutch disc

- ☐ Assignment ⇒ Electronic Catalogue of Original Parts
- ☐ Centre
⇒ ["2.2 Removing and installing clutch"](#),
[page 59](#)

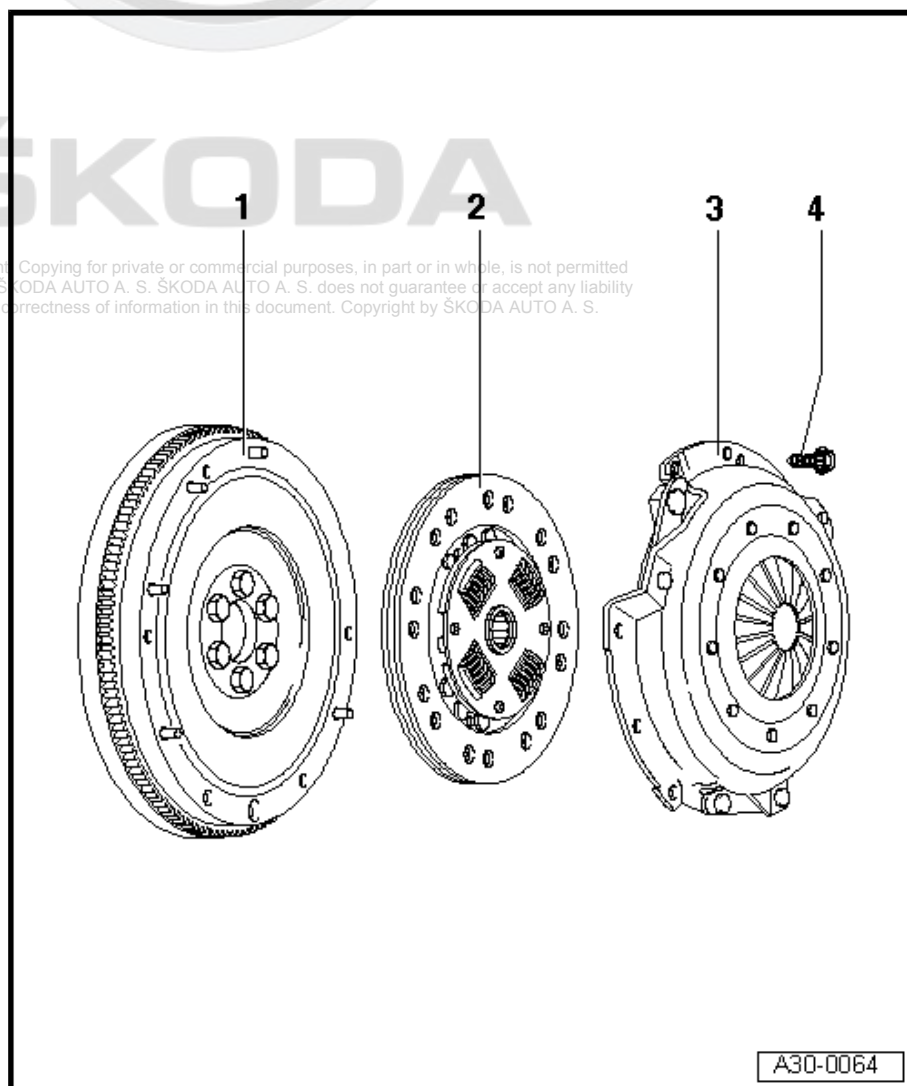
3 - Thrust washer

- ☐ Removing and installing
⇒ ["2.2 Removing and installing clutch"](#),
[page 59](#)
- ☐ Check ends of diaphragm spring
⇒ [page 62](#)
- ☐ Check springs and riveted joints ⇒ [page 62](#)

4 - Screw

- ☐ Assignment ⇒ Electronic Catalogue of Original Parts
- ☐ release or tighten in small stages crosswise
- ☐ Tightening torque:

◆ M6: 13 Nm



◆ M7: 20 Nm

2.2 Removing and installing clutch

⇒ [“2.2.1 Removing and installing clutch, Octavia II”, page 59](#)

⇒ [“2.2.2 Removing and installing clutch, Octavia III”, page 60](#)

2.2.1 Removing and installing clutch, Octavia II

Special tools and workshop equipment required

- ◆ Counterholder - MP1-223 (3067)-
- ◆ Centering mandrel - MP3-475A (3190A)-
- ◆ Centring mandrel - T10086-
- ◆ Grease - G 000 100-

Fault finding power transmission - problems with the clutch and clutch control ⇒ [page 63](#) .



Note

- ◆ *Observe the fault finding of the power transmission before replacing the clutch disc and the pressure plate - problems with the clutch and clutch control*
⇒ [“2.3 Fault finding power transmission - problems with the clutch and clutch control”, page 63](#) .
- ◆ *Replace the clutch discs and pressure plates if the riveting is damaged or loose.*
- ◆ *Assign the clutch disc and pressure plate in accordance with engine identification characters ⇒ Electronic Catalogue of Original Parts .*

(Gearbox removed)

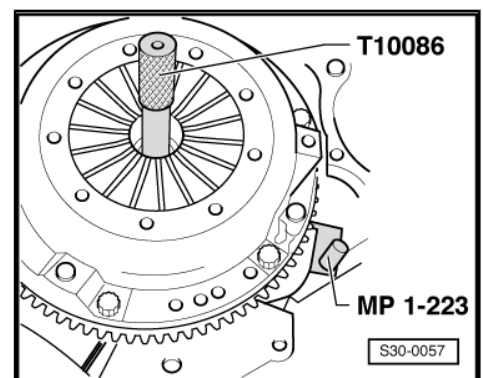
Centring the clutch disc and removing and installing the pressure plate (vehicles with 1,4 ltr engine)

- Release and tighten screws gradually and crosswise.
- When removing inverse the position of the pressure pad - MP1-223 (3067)- .



Note

- ◆ *The thrust surface of the pressure plate and the clutch disc lining must fully rest against the flywheel before the screws are inserted.*
- ◆ *Tighten fixing screws diagonally and evenly to prevent damage to pressure plate centring hole and flywheel centring pins.*



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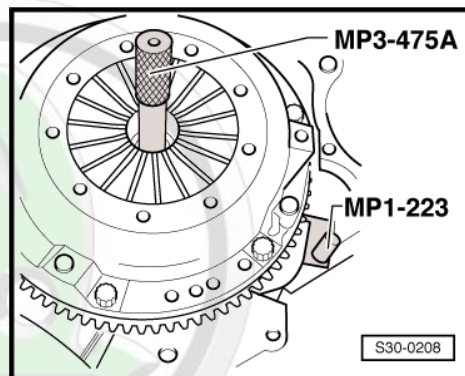
Centring the clutch disc and removing and installing the pressure plate (vehicles with 1,6 ltr engine)

- Release and tighten screws gradually and crosswise.
- When removing inverse the position of the pressure pad - MP1-223 (3067)- .



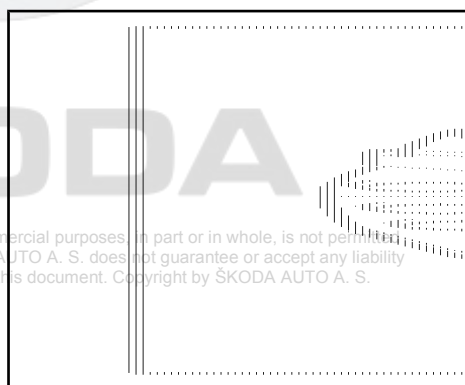
Note

- ◆ *The thrust surface of the pressure plate and the clutch disc lining must fully rest against the flywheel before the screws are inserted.*
- ◆ *Tighten fixing screws diagonally and evenly to prevent damage to pressure plate centring hole and flywheel centring pins.*



Check the extremities of the membrane spring -arrows-

- Wear is allowed up to half the membrane spring thickness.



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2.2.2 Removing and installing clutch, Octavia III

Special tools and workshop equipment required

- ◆ Counterholder - MP1-223 (3067)-
- ◆ Centering mandrel - MP3-475A (3190A)-
- ◆ Grease - G 000 100-

Removing

- Gearbox removed.

- Insert counterholder - MP1-223 (3067)- when slackening the bolts.

Note

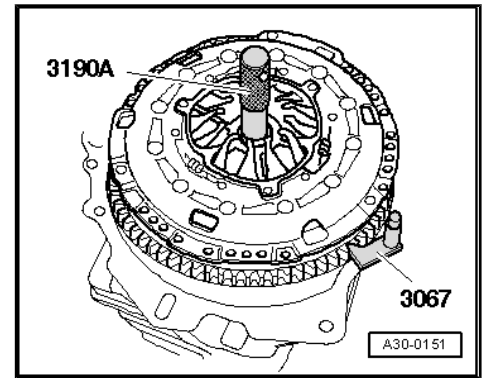
In order to avoid a deformation of the pressure plate when removing it (this leads to jerking during start-up), the bolts on the pressure plate must be loosened in small stages crosswise.

- Loosen and remove all bolts.
- Remove pressure plate and clutch plate.

Installing

Note

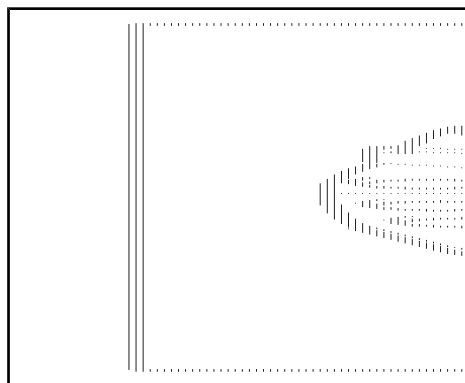
- ◆ *Assign the clutch disc and pressure plate in accordance with engine identification characters ⇒ Electronic Catalogue of Original Parts .*
- ◆ *Clean input shaft splines and, on used clutch plates, the hub splines too. Remove corrosion and grease the splines with an ultra-thin layer of grease - G 000 100- . Then move clutch plate to and fro on input shaft until hub moves freely on shaft. Remove all excess grease.*
- ◆ *Pressure plates are protected against corrosion and greased. Except for the friction surface for the clutch disc, the pressure plates may not be cleaned, doing so would reduce the lifetime of the clutch considerably.*
- ◆ *The friction surfaces for the clutch pressure plate and for the flywheel must be cleaned thoroughly (remove grease).*
- ◆ *If the clutch has burnt out, thoroughly clean the clutch housing, the flywheel and the engine in the area of the clutch to reduce the smell of burnt linings.*
- ◆ *The clutch disc must be centred with the centring pin - MP3-475A (3190A)- and the lining must lie completely on the fly wheel and the friction surface for the clutch pressure plate. Do not fit the securing bolts until you have done so.*
- ◆ *Tighten the securing bolts evenly crosswise in small stages to prevent damage to the centring holes for the pressure plate and the centring pins of the flywheel.*
- ◆ *Check whether the dowel sleeves for centring the engine/ gearbox are present in the cylinder block; insert if necessary.*
- ◆ *If the dowel sleeves are not installed, there are problems with the gearshift and the clutch or the gearbox is loud (sound of loose wheels).*
- *Fitting position of clutch disc. The lettering "gearbox side" or the shorter end of the lock hub with the spring cage faces the pressure plate.*



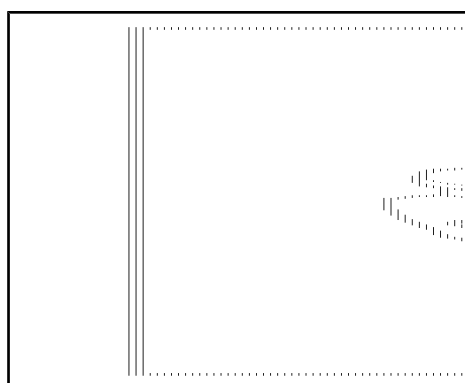


Check the extremities of the membrane spring

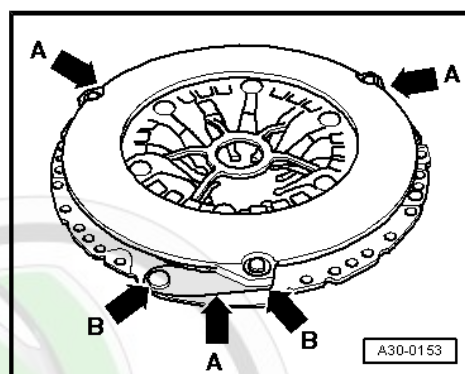
- Wear is allowed up to half the thickness of the membrane springs -arrows-.



Check tension springs and riveted joints



- Check tension springs -Arrows A- between the pressure plate and its covers for cracks.
- Check all riveted joints -arrows B- for firm seating.
- Replace a pressure plate with damaged springs/free riveted joints.



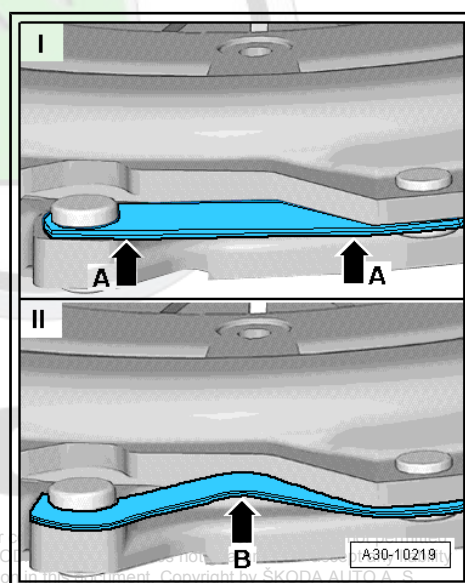
Condition of the springs and riveted joints

I - Tension springs are OK

- Slight bends in the external area -arrow A- are part of the standard condition.

II - Tension springs are damaged

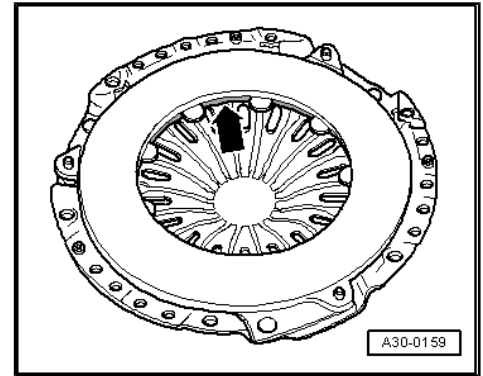
- Clutch plates with strongly bent or broken feather joints -arrow B- must be replaced.



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Check metal plate ring

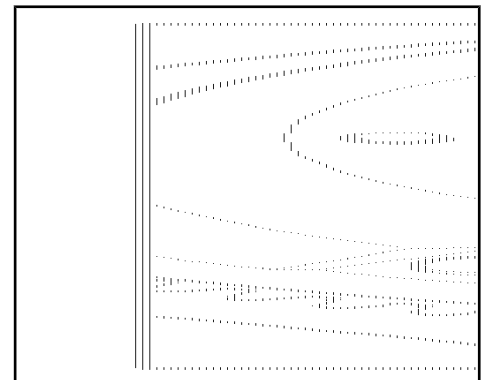
- Check metal plate ring -arrow- in the clutch plate for damage.
- Replace the clutch plates with the broken metal plate ring.



- Centre clutch disc with centering pin - MP3-475A (3190A)- .
- Insert counterholder - MP1-223 (3067)- when tightening the bolts.
- Bring all bolts to the end stop position crosswise in small stages.
- Installing the gearbox
⇒ [“2.3 Installing the gearbox”, page 122](#) .

Tightening torque

- ◆ Pressure plate to flywheel
⇒ [“2.1 Assembly overview - clutch”, page 57](#) .



2.3 Fault finding power transmission - problems with the clutch and clutch control



Note

Check hydraulic clutch control
⇒ [“1.14 Checking the master and slave cylinder”, page 51](#) .

Always check the fault mentioned by the customer first before repairing the clutch. In each individual case, it must be determined if indeed there are problems with the clutch or the incorrect setting of the gearshift is cause for complaint.

Fault	Fault description	Measure
Clutch pedal does not return to initial position.	◆ Air in line system.	– Vent air from the line system; top up with brake fluid.
	◆ Line system, master or slave cylinder leaking.	– Replace defective component, vent air from the line system; top up with brake fluid.
	◆ Release bearing is tilted on the guide bushing, eroded.	– Replace guide bushing and release bearing.
	◆ Membrane spring of the pressure plate broken.	– Replace pressure plate.

Fault	Fault description	Measure
Actuating force on the clutch pedal too high.	◆ Retractor spring defect.	– Replace retractor spring.



Fault	Fault description	Measure
	◆ Clutch release force increased due to wear of clutch linings.	– Inform customer (higher release force with increased wear). – Replace clutch disc. when the distance base/rivet is below 0.1 mm.
	◆ Release bearing on the guide bushing is tilted, seized.	– Replace defective components.
	◆ Pressure plate with wrong spring identification.	– Assign pressure plate via the ⇒ Electronic catalogue of original parts .
	◆ Mechanical fault at the pressure plate or the clutch disc.	– Replace defective components.
	◆ Clutch disc on the serration sluggish/jams.	– Check the hub for damage (burrs), if necessary replace clutch disc. – Clean the hub and the drive shaft teeth of corrosion and residues of lubricant and grease with grease for splines - G 000 100- . Move clutch disc back and forth. remove excess grease.

Fault	Fault description	Measure
Noises when operating the clutch.	◆ Release bearing defective, guide of clutch release bearing not in order, contact surface drained off.	– Replace loud release bearing after disassembly. – Replace guide bushings if damaged.
	◆ The contact surface of the pressure plate is defective (the tips of the membrane spring are bent. broken). Release bearing is off-centre.	– Replace pressure plate. – Check release bearing and guide bushing, replace if necessary. – Check position of clutch release lever. – Check dowel sleeves.
	◆ Centre displacement of engine/gearbox.	– Check dowel sleeves.
	◆ Clutch disc installed the wrong way up.	– Correct installation.
	◆ Wrong clutch disc installed.	– Assign clutch disc via the ⇒ Electronic catalogue of original parts .

Fault	Fault description	Measure
Rattling, scratching occurs when the forward or reverse gear is engaged, gearshift jams, is sluggish, shifting is not possible, clutch without operation.	◆ Air in the system. clutch does not separate fully.	– Bleed and check system; top up with brake fluid.



Fault	Fault description	Measure
	♦ Master cylinder or slave cylinder is leaking, line is leaking.	– Replace defective component. top up with brake fluid. bleed system.
	♦ The travel of the clutch pedal is not sufficient (carpet, foot mat under the foot controls), clutch is not fully depressed.	– Inform customer.
	♦ The pressure plate is bent due to incorrect installation, the clutch disc is deformed due improper handling.	– Check components, if necessary replace, make sure the centering pins are correctly fitted. – If scratching still occurs. check the serration of the clutch disc on the drive shaft for ease of movement. if necessary repair the gearbox.
	♦ Tips of membrane spring broken or bent (assembly fault, release bearing moves off-centre).	– Replace pressure plate. – Check release bearing and guide bushing, replace if necessary. – Check dowel sleeves.
	♦ Clutch disc too thick.	– Assign clutch disc via the ⇒ Electronic catalogue of original parts .
	♦ Deposit adhering to the flywheel (long immobilization time, high humidity).	– Slightly rub down friction surfaces of the clutch linings or replace completely the severely corroded parts.
	♦ Clutch disc on the serration sluggish/jams. Corrosion on the hub, damage during the assembly. Hub profile knocked out on one side.	– Check the hub for damage, if necessary replace the clutch disc. – Remove corrosion from the hub and the shaft as well as residues of lubricant. Grease shaft with a thin layer of grease for splines - G 000 100- . – Move clutch disc back and forth. remove excess grease. – Check position of dowel sleeves on knocked out hub profile. – Check release bearing, guide bushing and pressure plate, replace if necessary.
	♦ Lifting of pressure plate too low (wrong pressure plate installed).	– Assign pressure plate via the ⇒ Electronic catalogue of original parts .
	♦ Displacement of engine/gearbox too large (dowel sleeves missing). support panel of clutch plate bent through this.	– Insert dowel sleeves before gearbox has been fitted. – Check clutch disc and pressure plate for damage. if necessary replace.

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Fault	Fault description	Measure
	◆ The lining is spalled off because of too high revs (shift back into lower gears during high speeds). ◆ When starting, linings are spalled off through slipping for too long a time.	– Replace clutch disc. Inform customer.

Fault	Fault description	Measure
Load change jolts when throttle is depressed and sudden reduction of the engine speed.	◆ Assembly bracket too soft.	– Inform customer. Assign hanger via the ⇒ Electronic catalogue of original parts .
	◆ Irregular engine running.	– Check engine setting. correct.
	◆ Clutch disc with predamper is built in against gear rattling.	– Inform customer.
	◆ Centre displacement of engine/gearbox.	– Test dowel sleeves. replace if necessary.

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Fault	Fault description	Measure
Clutch slips through, no or bad pre-drive.	◆ Wrong clutch disc fitted, wrong pressure plate installed.	– Assign the clutch disc and pressure plate via the ⇒ Electronic catalogue of original parts .
	◆ Clutch disc worn out, burnt, pressure plate overheated, grooves, pressure plate deformed through incorrect assembly, compressive force of the pressure plate too low, driving error, natural wear.	– Replace clutch disc. – Replace pressure plate. – Inform customer.
	◆ Clutch disc, pressure plate, flywheel - oily. Radial shaft seal of the engine or the gearbox defective. Grease on the contact surface through excess greasing of the hub.	– Replace clutch disc. – Clean contact surfaces of pressure plate and flywheel. – Replace radial shaft seal, remove excess grease from the drive shaft.
	◆ Clutch disc installed the wrong way up.	– Correct installation. check clutch disc. replace if necessary.
	◆ Flywheel depth too large or excess removal at the base of the thrust surface.	– Assign the sealing flange via the ⇒ electronic catalogue of original parts . – Inspect clutch disc and pressure plate, replace if necessary.
	◆ Slave cylinder leaking.	– Replace slave cylinder.



Fault	Fault description	Measure
Clutch grabbing, unit shaking.	♦ Air in the system.	– Bleed system. check brake fluid level. check system for tightness. – Replace defective part.
	♦ Engine does not run clean.	– Check engine setting. correct.
	♦ Driving error. starting speed is too low.	– Inform customer.
	♦ Wrong clutch disc installed.	– Assign clutch disc via the ⇒ Electronic catalogue of original parts .
	♦ Assembly bearing too soft, knocked out.	– Assign the assembly bracket via the ⇒ Electronic catalogue of original parts .
	♦ Clutch lining. contact surface of pressure plate and flywheel oily (oil leakage from the clutch housing).	– Check radial shaft seal of the drive shaft for clutch or check crankshaft. if necessary replace. – Replace clutch disc. clean pressure plate and flywheel.
	♦ Release bearing on the guide bushing is tilted, seized (presses on one side onto the membrane springs of the pressure plate).	– Replace release bearing and guide bushing. – Check actuating elements and bearing for actuating elements.
	♦ The contact surface of the pressure plate lifts off only unilaterally due to the tilted release bearing. ♦ Pressure plate housing deformed when installed. Contact surface of the pressure plate lifts off only unilaterally.	– Check the contact surface of the clutch lining on the flywheel, check pressure plate and membrane springs, replace pressure plate if necessary. – Replace release bearing and guide bushing.
	♦ Drive shaft too heavily greased (traces of grease on the clutch disc, pressure plate and flywheel).	– Remove grease from pressure plate and flywheel. replace if damaged (traces of wear. traces of overheating. grooves). – Remove traces of grease from hub and shaft, grease shaft with grease for splines - G 000 100- . – Move clutch disc back and forth. remove excess grease.

Fault	Fault description	Measure
Acoustic knock »clack« when clutch is released.	♦ Acceleration is assigned to the load carrier/drive shaft through the sudden press of the clutch pedal. The drive shaft serration of the pinions in mesh knocks, this noise is increased for clutch discs with noise insulation as the damping reaches the stop.	– Inform customer.



Fault	Fault description	Measure
Noises in idle.	◆ Torsional damper spring kinked.	– Replace clutch disc.
	◆ Clutch disc fitted without pre-damper (idle rattling).	– Assign clutch disc via the ⇒ Electronic catalogue of original parts .
	◆ Pressure plate deformed, imbalance.	– Replace pressure plate.
	◆ Irregular engine running.	– Check engine setting. correct if necessary.
	◆ Displacement of engine/gear-box too large (dowel sleeves missing).	– Insert dowel sleeves before gearbox has been fitted.
	◆ Intermediate plate grinds at fly-wheel.	– Insert intermediate plate on sealing flange and push onto the dowel sleeves.



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34 – Controls, housing

1 Shift mechanism

⇒ [“1.1 Installation position - shift mechanism”, page 69](#)

⇒ [“1.2 Fitting position overview - switching operation”, page 71](#)

⇒ [“1.3 Summary of components - gearshift knob and cover”, page 72](#)

⇒ [“1.4 Summary of components - shift lever and shift housing”, page 74](#)

⇒ [“1.5 Summary of components - control cables”, page 80](#)

⇒ [“1.6 Removing and installing gear knob”, page 84](#)

⇒ [“1.7 Removing and installing selector mechanism”, page 85](#)

⇒ [“1.8 Repairing shift mechanism”, page 92](#)

⇒ [“1.9 Setting the shift mechanism”, page 97](#)

⇒ [“1.10 Removing and installing bellcrank cable pull”, page 101](#)

⇒ [“1.11 Dismantling and assembling selector mechanism”, page 103](#)

⇒ [“1.12 Replacing the sealing ring for the gearshift shaft”, page 107](#)

1.1 Installation position - shift mechanism

-Arrow A- Shift movement

-Arrow B- Selector movement



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A - Shift cable

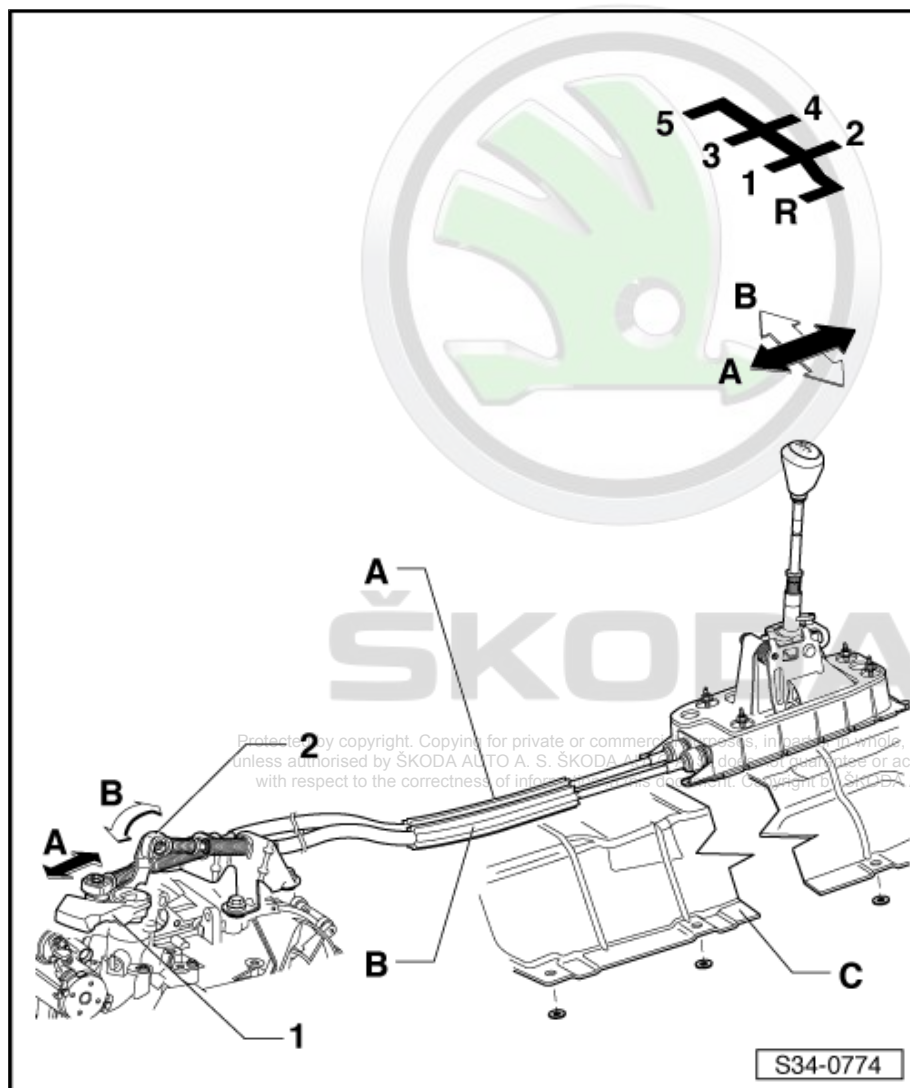
B - Selector cable

C - Heat shield

- ❑ Remove before removing selector mechanism

1 - Gearshift lever

2 - Relay lever



1.2 Fitting position overview - switching operation

I -

⇒ ["1.3 Summary of components - gearshift knob and cover", page 72](#)

II -

⇒ ["1.4.1 Summary of components - shift lever and shift housing, Octavia II, vehicles up to 10.2006", page 74](#)

II -

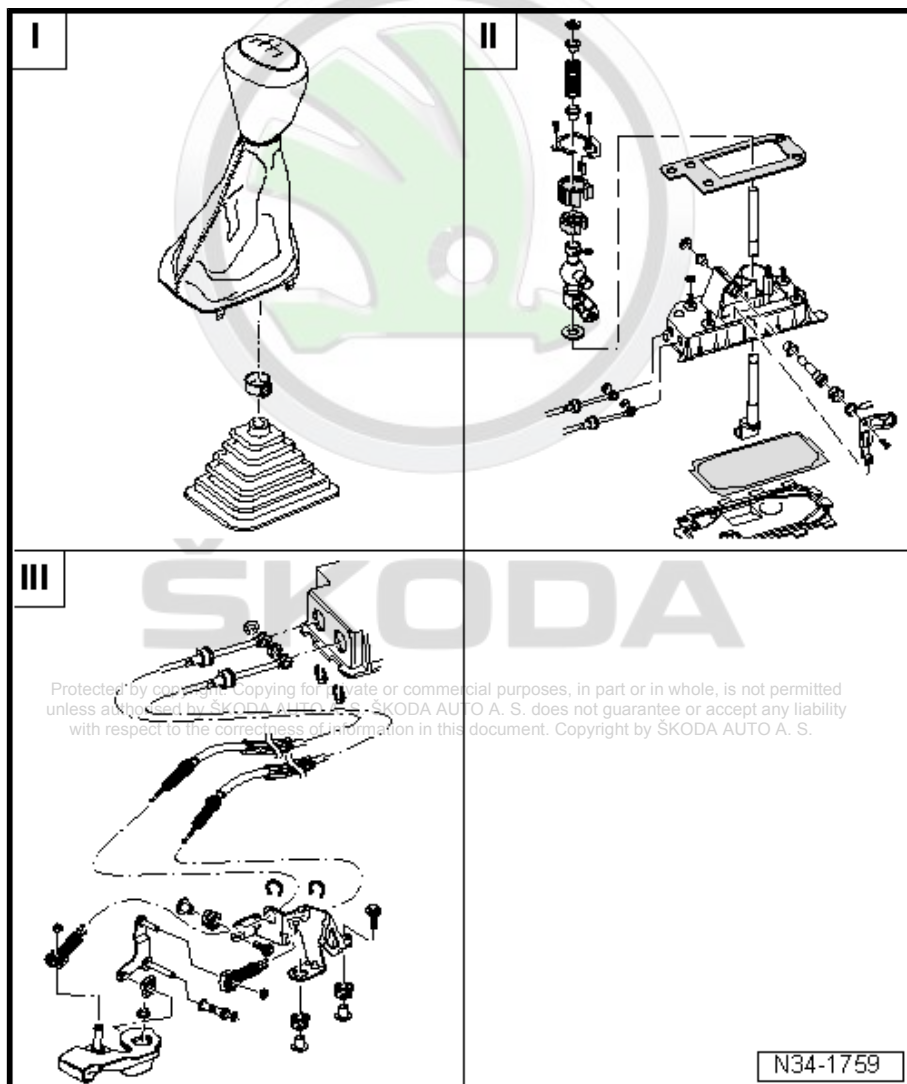
⇒ ["1.4.2 Summary of components - shift lever and shift housing, Octavia II, vehicles from 10.2006", page 76](#)

III -

⇒ ["1.5.1 Summary of components - control cables, Octavia II vehicles to 10/2006", page 80](#)

III -

⇒ ["1.5.2 Summary of components - control cables, Octavia II vehicles from 10/2006", page 82](#)





1.3 Summary of components - gearshift knob and cover

⇒ ["1.3.1 Summary of components - gearshift knob and cover, Octavia III", page 72](#)

⇒ ["1.3.2 Summary of components - gearshift knob and cover, Octavia III", page 73](#)

1.3.1 Summary of components - gearshift knob and cover, Octavia III

1 - Gearshift knob

- ☐ with collar
- ☐ The gearshift knob and collar can be separated from each other (when separating, the circlip is damaged)
- ☐ Plaque of gearshift lever can only be separated from the gearshift knob e.g. with a screwdriver.
- ☐ Assignment ⇒ Electronic Catalogue of Original Parts
- ☐ Removing and installing
⇒ ["1.3 Summary of components - gearshift knob and cover", page 72](#)

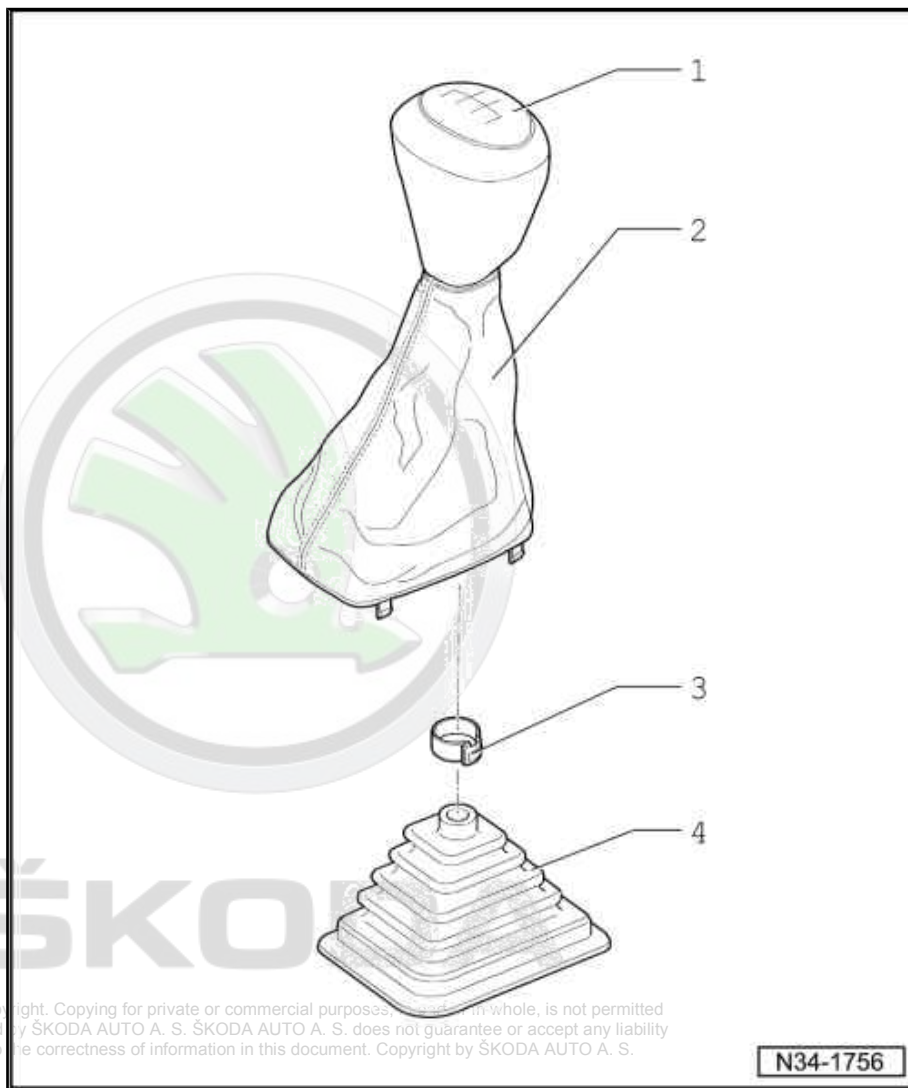
2 - Collar

3 - Clamp

- ☐ For securing gearshift knob to gear lever
- ☐ Replace after disassembly

4 - Noise insulation

- ☐ not fitted to all vehicles
- ☐ Catch pegs are positioned at different distances
- ☐ therefore can only be inserted in one position



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1.3.2 Summary of components - gearshift knob and cover, Octavia III

1 - Transmission cover with gearshift lever

2 - Hexagon nut

- ☐ Tightening torques:

◆ M8: 25 Nm

◆ M6: 8 Nm

3 - Retaining bracket

- ☐ for centre console

4 - Retaining bracket

- ☐ for centre console

5 - Cover for noise insulation

6 - Emblem

- ☐ Can be carefully levered off gear knob of plastic or leather using a wedge - 3409-

7 - Gearshift knob

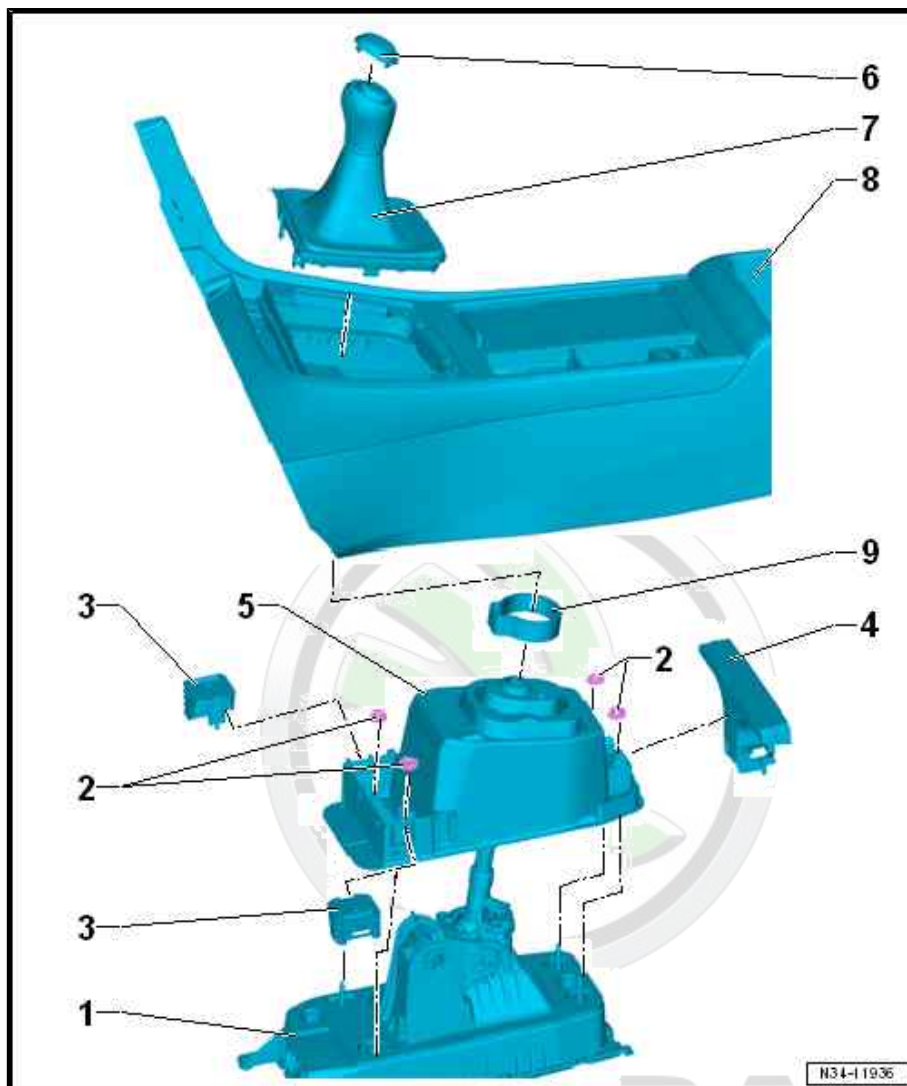
- ☐ with collar
- ☐ Gearshift knob and collar must not be separated
- ☐ Always replace together
- ☐ Removing and installing
⇒ ["1.3 Summary of components - gearshift knob and cover", page 72](#)

8 - Centre console

- ☐ Installation overview ⇒
General body repairs,
Exterior; Rep. gr. 68 ;
Centre console; instal-
ling and removing centre console.

9 - Clamp

- ☐ For securing gearshift knob to gear lever
- ☐ Replace after disassembly
- ☐ fit with hose binding claw , e.g. -V.A.G 1275-



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1.4 Summary of components - shift lever and shift housing

⇒ "1.4.1 Summary of components - shift lever and shift housing, Octavia II, vehicles up to 10.2006", page 74

⇒ "1.4.2 Summary of components - shift lever and shift housing, Octavia II, vehicles from 10.2006", page 76

⇒ "1.4.3 Summary of components - selector lever and selector housing, Octavia III", page 78

1.4.1 Summary of components - shift lever and shift housing, Octavia II, vehicles up to 10.2006



Note

Grease bearing and friction surfaces with grease - G 000 450 02- .

1 - Circlip

- ☐ Removing and installing
⇒ page 76

2 - Bushing

3 - Pressure spring

4 - Bushing

5 - 5 Nm

6 - Cover

7 - Damping

8 - Damping

9 - Bearing shell

10 - Shift lever guide

11 - Insulating washer

12 - Seal

- ☐ between shift housing and body
- ☐ self-adhesive
- ☐ stick onto shift housing

13 - Gearshift lever

14 - Shift housing

15 - Bushing

16 - Bearing bolt

17 - Guide bushing

18 - Pressure spring

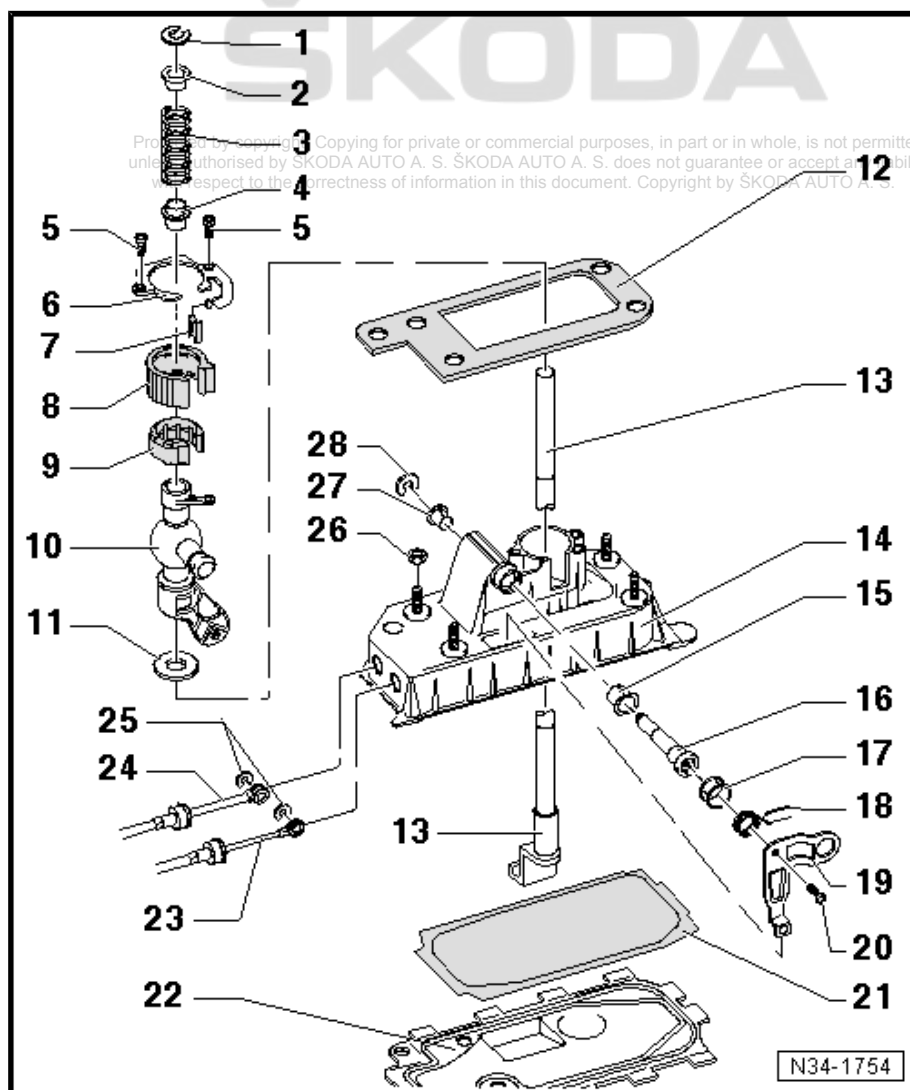
- ☐ installing ⇒ page 76

19 - Selector angle plate

20 - 5 Nm

21 - Seal

- ☐ Replace after disassembly



22 - Cover

- ☐ bend up tabs for removing
- ☐ Replace after disassembly

23 - Selector cable

- ☐ Removing and installing ⇒ [“1.10 Removing and installing bellcrank cable pull”, page 101](#)
- ☐ Fitting position ⇒ [“1.1 Installation position - shift mechanism”, page 69](#)
- ☐ Adjust ⇒ [“1.9 Setting the shift mechanism”, page 97](#)
- ☐ detaching and attaching at selector angle plate ⇒ [page 75](#)

24 - Shift cable

- ☐ Removing and installing ⇒ [“1.10 Removing and installing bellcrank cable pull”, page 101](#)
- ☐ Fitting position ⇒ [“1.1 Installation position - shift mechanism”, page 69](#)
- ☐ Adjust ⇒ [“1.9 Setting the shift mechanism”, page 97](#)

25 - Circlip

- ☐ Replace after disassembly

26 - Nut

- ☐ 4 units
- ☐ Tightening torques:

◆ M8: 25 Nm

◆ M6: 8 Nm

27 - Bushing

- ☐ fits in one position only

28 - Circlip

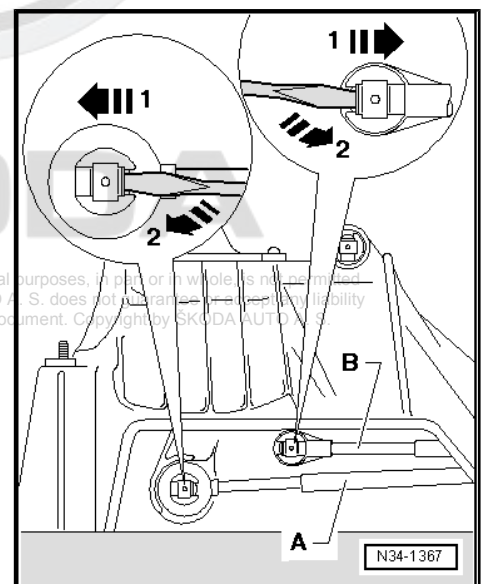
- ☐ Replace after disassembly

Detaching and attaching selector cable and shift cable

- Remove lock washer from shift cable -A- and from selector cable -B-.

To do so lift the tab with a screwdriver -arrow 1- and press off lock washer -arrow 2-.

- Remove shift cable -A- from the support of the gearshift lever.
- Remove selector cable -B- from the support of the selector angle plate.



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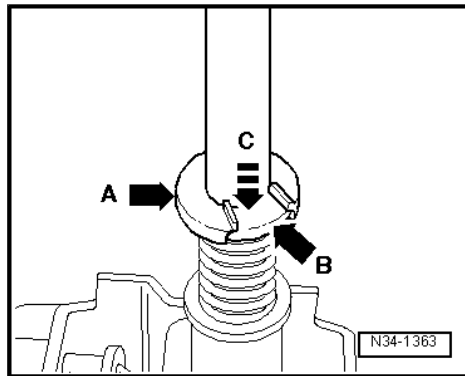
Removing and installing circlip

- To remove and install the lock washer -arrow A- press spacer bush -arrow B- with a screwdriver up to the stop in -direction of arrow C- and detach lock washer.



Note

- ♦ Do not twist bush when pressing down.
- ♦ Mounting slot in shift lever for lock washer must be visible.
- ♦ Release spring carefully.



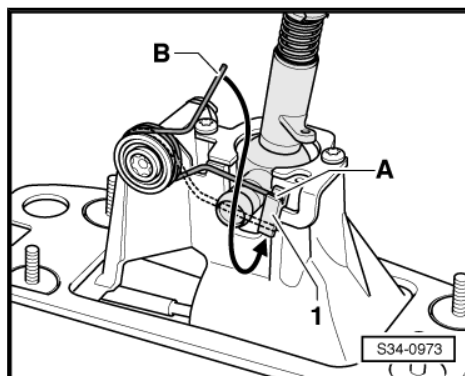
Install pressure spring

- Insert the clamp -A- of the pressure spring from the top into the guide -1-.
- Press the clamp -B- of the pressure spring downwards and insert from the bottom into the guide.



Note

The illustration shows without the removed selector angle plate.



1.4.2 Summary of components - shift lever and shift housing, Octavia II, vehicles from 10.2006



Note

Grease all bearing points and contact surfaces with grease -G 000 450 02-.



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1 - Cover

- ☐ bend up tabs for removing
- ☐ Replace after disassembly

2 - Seal

- ☐ Replace after disassembly

3 - Gearshift lever

4 - O-ring

- ☐ insert onto gearshift lever -arrow- up to the stop
- ☐ Replace if damaged.

5 - Locking clip

- ☐ do not damage cables when removing
- ☐ Replace after disassembly

6 - Selector cable

- ☐ Removing and installing
⇒ ["1.10 Removing and installing bellcrank cable pull", page 101](#)
- ☐ Fitting position
⇒ ["1.1 Installation position - shift mechanism", page 69](#)
- ☐ Adjust
⇒ ["1.9 Setting the shift mechanism", page 97](#)

7 - Bush for selector cable

8 - Shift cable

- ☐ Removing and installing ⇒ ["1.10 Removing and installing bellcrank cable pull", page 101](#)
- ☐ Fitting position ⇒ ["1.1 Installation position - shift mechanism", page 69](#)
- ☐ Adjust ⇒ ["1.9 Setting the shift mechanism", page 97](#)

9 - Damping

- ☐ Removing and installing ⇒ ["1.11 Dismantling and assembling selector mechanism", page 103](#)

10 - Bearing shell

- ☐ Removing and installing ⇒ ["1.11 Dismantling and assembling selector mechanism", page 103](#)
- ☐ when removing. the catches of the bearing shell are usually damaged
- ☐ Replace after disassembly

11 - Bushing

12 - Circlip

- ☐ Removing and installing ⇒ [page 76](#)

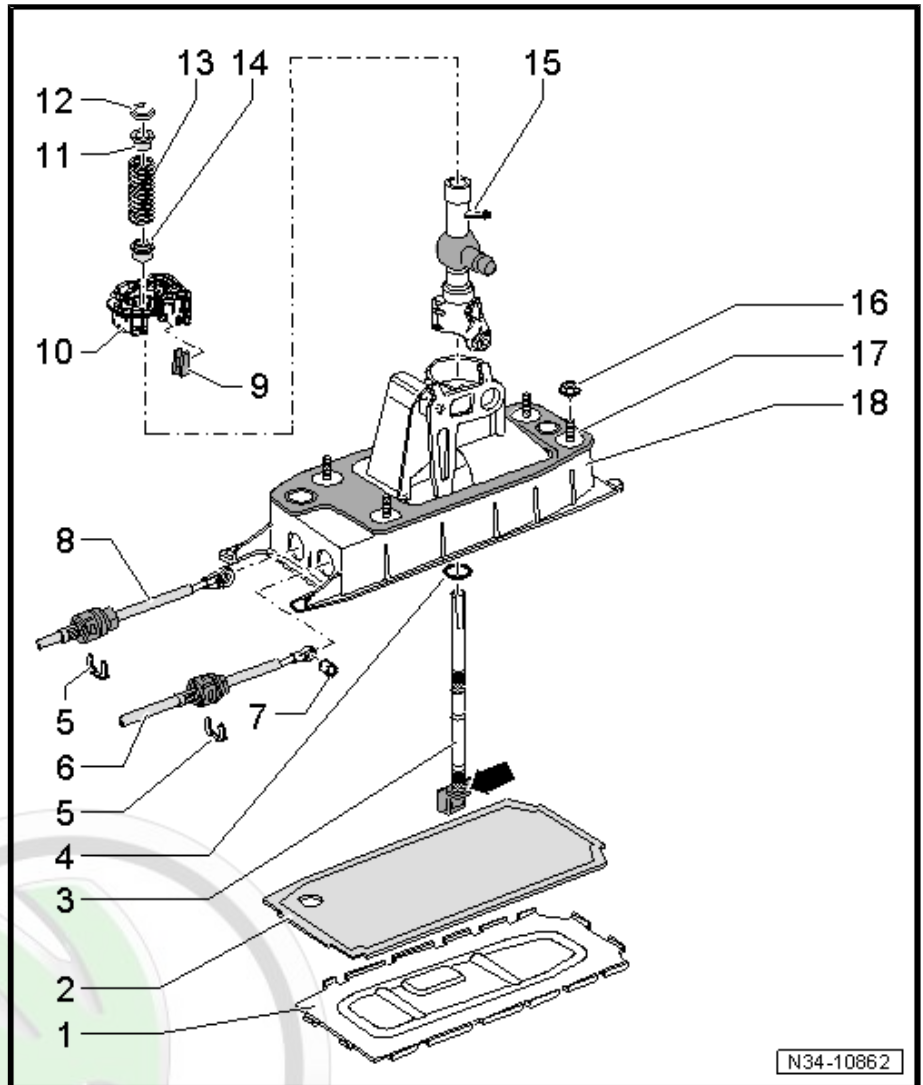
13 - Pressure spring

- ☐ Removing and installing ⇒ [page 76](#)

14 - Bushing

15 - Shift lever guide

- ☐ Removing and installing ⇒ ["1.11 Dismantling and assembling selector mechanism", page 103](#)





16 - Nut

- ☐ Tightening torques:

- ◆ M8: 25 Nm
- ◆ M6: 8 Nm

17 - Seal

- ☐ between shift housing and body
- ☐ self-adhesive

18 - Shift housing

- ☐ with pressure spring and selector angle
- ☐ Pressure spring as well as selector angle cannot be removed

1.4.3 Summary of components - selector lever and selector housing ,Octavia III



Note

- ◆ Coat bearings and friction surfaces with grease.
- ◆ Assign the grease via the ⇒ *Electronic Catalogue of Original Parts* .

1 - Gearshift shaft with cover

2 - Sealing ring

- ☐ for gearshift shaft
- ☐ Replace
⇒ ["1.12 Replacing the sealing ring for the gearshift shaft", page 107](#)

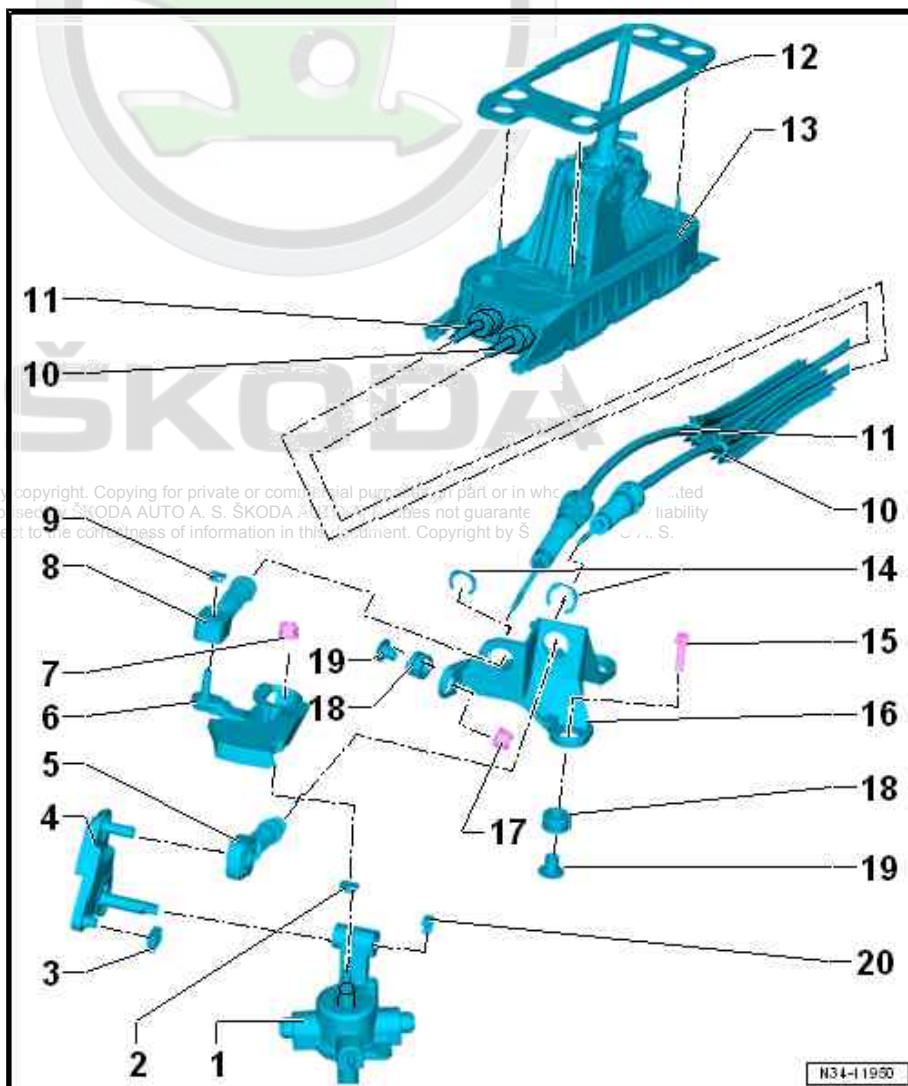
3 - Sliding shoe

4 - Relay lever

- ☐ Assignment ⇒ *Electronic Catalogue of Original Parts*
- ☐ Fitting position
⇒ [page 95](#)
- ☐ After installing, set shift mechanism
⇒ ["1.9 Setting the shift mechanism", page 97](#)
- ☐ Remove relay lever together with cable lock for selector cable
⇒ [page 96](#) .

5 - Cable lock

- ☐ for selector cable to relay lever
- ☐ After installing, set shift mechanism
⇒ ["1.9 Setting the shift mechanism", page 97](#)
- ☐ do not interchange, cable locks for selector cable at relay lever and for shift cable at gearshift lever are different, as-



signment ⇒ [page 94](#)

- ☐ remove from relay lever ⇒ [page 97](#)
- ☐ press onto relay lever ⇒ [page 97](#)

6 - Gearshift lever

- ☐ insert in such a way that the interrupted spacing of the teeth matches the gearshift shaft ⇒ [page 96](#)
- ☐ Grease when fitting
- ☐ Fitting position ⇒ [page 95](#)
- ☐ After installing, set shift mechanism ⇒ [“1.9 Setting the shift mechanism”, page 97](#)

7 - Hexagon nut, 23 Nm

8 - Cable lock

- ☐ for shift cable to gearbox shift lever
- ☐ After installing, set shift mechanism ⇒ [“1.9 Setting the shift mechanism”, page 97](#)
- ☐ do not interchange, cable locks for selector cable at relay lever and for shift cable at gearshift lever are different, assignment ⇒ [page 94](#)

9 - Safety mechanism

- ☐ Replace after disassembly

10 - Selector cable

- ☐ connected with cable end-piece for selector cable

11 - Shift cable

- ☐ connected with cable end-piece for gear selector cable

12 - Seal

- ☐ between shift housing and underbody
- ☐ replace after removing the shift housing
- ☐ self-adhesive
- ☐ stuck onto the shift housing

13 - Shift housing

14 - Safety mechanism

- ☐ Replace after disassembly
- ☐ do not damage cables when removing

15 - Hexagon bolt, 20 Nm

- ☐ 2 units
- ☐ for attaching cable support

16 - Cable support

- ☐ After installing, set shift mechanism ⇒ [“1.9 Setting the shift mechanism”, page 97](#)

17 - Hexagon nut, 20 Nm

- ☐ for attaching cable support

18 - Insert

- ☐ 3 units
- ☐ Mounting of cable support to gearbox

19 - Spacer

- ☐ 3 units

20 - Retaining clip



1.5 Summary of components - control cables

⇒ [“1.5.1 Summary of components - control cables, Octavia II vehicles to 10/2006”, page 80](#)

⇒ [“1.5.2 Summary of components - control cables, Octavia II vehicles from 10/2006”, page 82](#)

1.5.1 Summary of components - control cables, Octavia II vehicles to 10/2006



Note

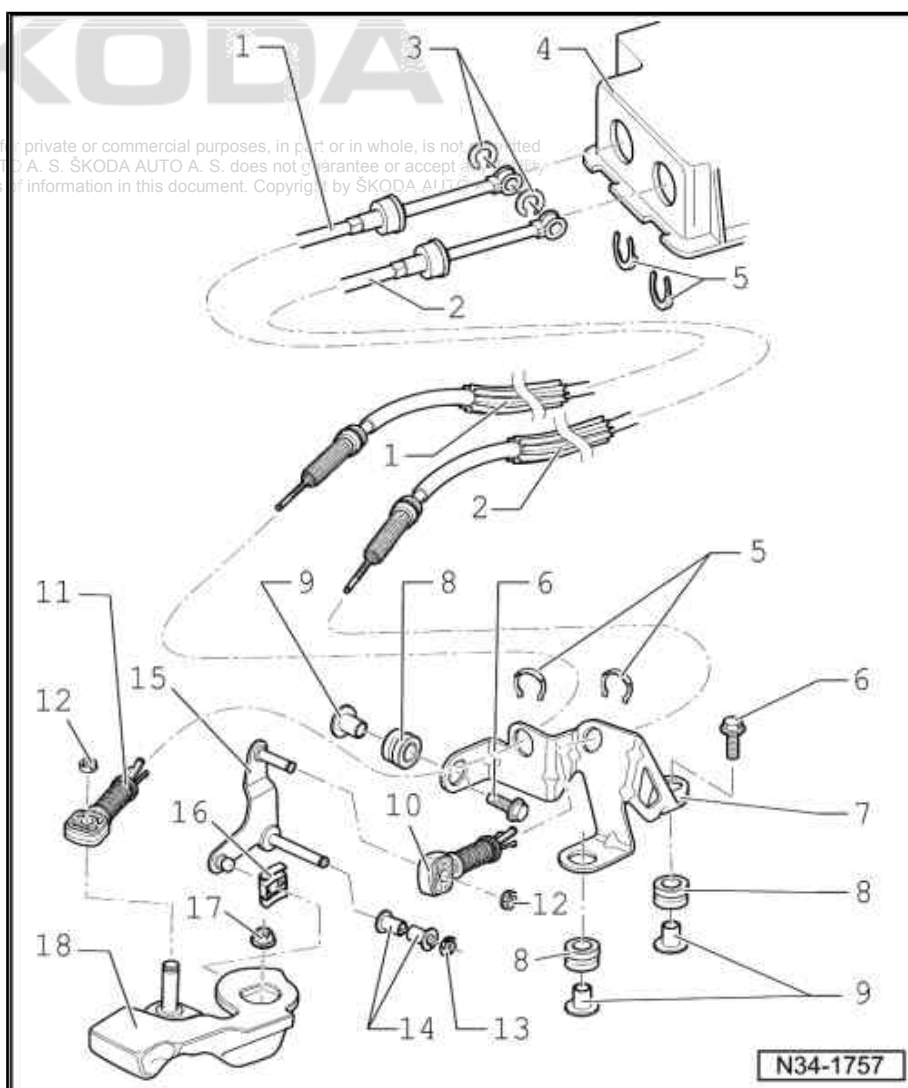
Grease bearing and friction surfaces with grease - G 000 450 02- .

1 - Shift cable

- ☐ connect with cable lock pos. 11
- ☐ Fitting position
⇒ [“1.1 Installation position - shift mechanism”, page 69](#)
- ☐ Removing and installing
⇒ [“1.10 Removing and installing bellcrank cable pull”, page 101](#)
- ☐ Adjust
⇒ [“1.9 Setting the shift mechanism”, page 97](#)
- ☐ as of 11.06 the attachment of the control cable in the shift housing is modified

2 - Selector cable

- ☐ connect with cable lock pos. 10
- ☐ Fitting position
⇒ [“1.1 Installation position - shift mechanism”, page 69](#)
- ☐ Removing and installing
⇒ [“1.10 Removing and installing bellcrank cable pull”, page 101](#)
- ☐ Adjust
⇒ [“1.9 Setting the shift mechanism”, page 97](#)
- ☐ as of 11.06 the attachment of the control cable in the shift housing is modified



3 - Circlip

- ☐ Replace after disassembly
- ☐ as of 11.2006 the lock washers are no longer available

4 - Shift housing

5 - Circlip

- ☐ do not damage cables when removing

- ☐ Replace after disassembly

6 - 20 Nm

- ☐ 3 units
- ☐ for cable support

7 - Cable support

- ☐ made out of plastic or metal

8 - Grommet

- ☐ Mounting of cable support to gearbox

9 - Spacer

10 - Cable lock

- ☐ for selector cable to relay lever
- ☐ do not interchange, cable locks for selector cable at relay lever and for shift cable at gearshift lever are different, assignment ⇒ [page 92](#)
- ☐ After installing, set shift mechanism ⇒ [“1.9 Setting the shift mechanism”, page 97](#)
- ☐ as of 06.2007 it is fitted together with plastic relay lever
- ☐ remove from plastic relay lever ⇒ [“1.8 Repairing shift mechanism”, page 92](#)

11 - Cable lock

- ☐ for shift cable to gearbox shift lever
- ☐ do not interchange, cable locks for selector cable at relay lever and for shift cable at gearshift lever are different, assignment ⇒ [page 92](#)
- ☐ After installing, set shift mechanism ⇒ [“1.9 Setting the shift mechanism”, page 97](#)

12 - Circlip

- ☐ Replace after disassembly
- ☐ is not required for cable lock for selector cable at relay lever, if relay lever is made of plastic

13 - Circlip

- ☐ Replace after disassembly
- ☐ is not required. if the relay lever is made of plastic

14 - Bushing

- ☐ is not required. if the relay lever is made of plastic

15 - Relay lever

- ☐ Fitting position ⇒ [page 92](#)
- ☐ After installing, set shift mechanism ⇒ [“1.9 Setting the shift mechanism”, page 97](#)
- ☐ as of 06.2007 the relay level is made of plastic
- ☐ Removing and installing plastic relay lever together with cable lock
⇒ [“1.8 Repairing shift mechanism”, page 92](#)
- ☐ If the relay lever is made of plastic. neither the bushings pos. 14 nor the lock washer pos. 12 are required

16 - Sliding shoe

17 - 23 Nm

- ☐ Replace after disassembly

18 - Gearshift lever

- ☐ with balancing weight
- ☐ insert in such a way that the interrupted spacing of the teeth matches the gearshift shaft
- ☐ Fitting position ⇒ [page 92](#)
- ☐ After installing, set shift mechanism ⇒ [“1.9 Setting the shift mechanism”, page 97](#)
- ☐ As of 06/2006, the diameter of the fixing bolts is smaller ⇒ [page 92](#)



1.5.2 Summary of components - control cables, Octavia II vehicles from 10/2006



Note

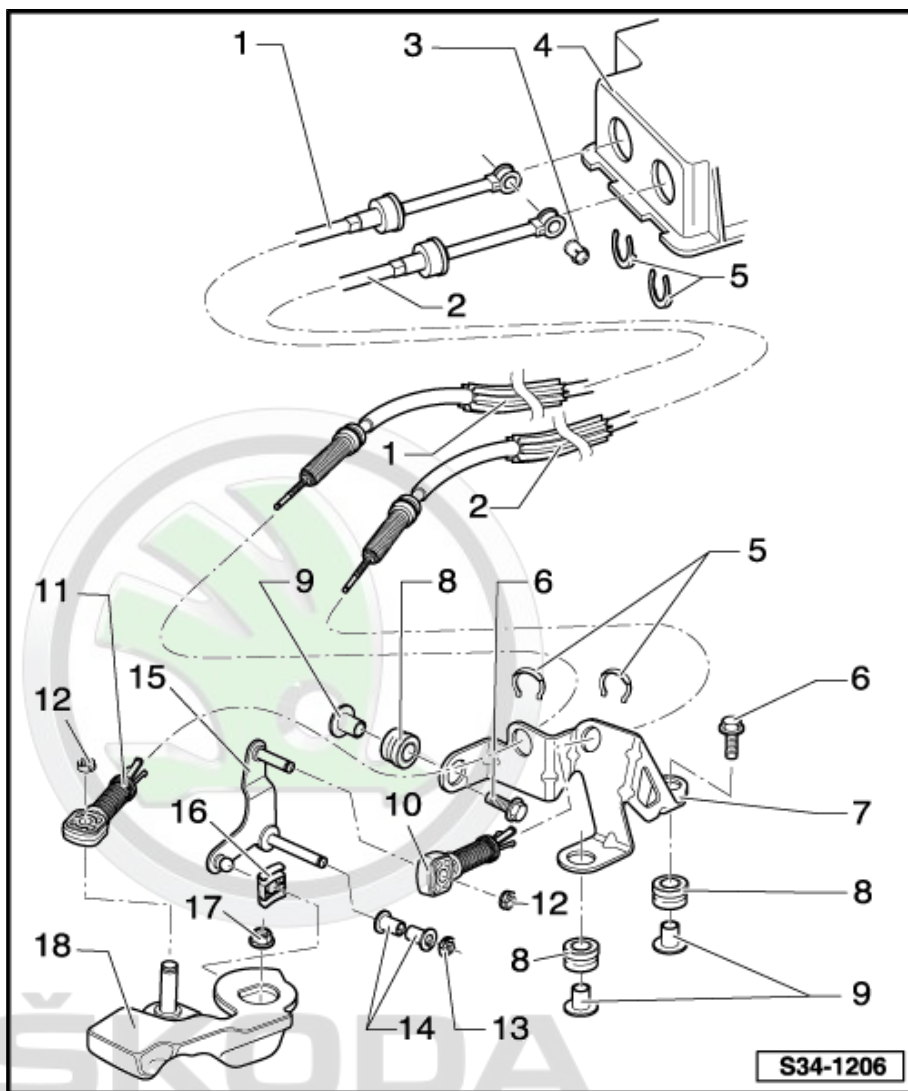
Grease bearing and friction surfaces with grease - G 000 450 02- .

1 - Shift cable

- ☐ connect with cable lock pos. 11
- ☐ Fitting position
⇒ ["1.1 Installation position - shift mechanism", page 69](#)
- ☐ Removing and installing
⇒ ["1.10 Removing and installing bellcrank cable pull", page 101](#)
- ☐ Adjust
⇒ ["1.9 Setting the shift mechanism", page 97](#)
- ☐ as of 11.2006 the attachment of the control cable in the shift housing is modified

2 - Selector cable

- ☐ connect with cable lock pos. 10
- ☐ Fitting position
⇒ ["1.1 Installation position - shift mechanism", page 69](#)
- ☐ Removing and installing
⇒ ["1.10 Removing and installing bellcrank cable pull", page 101](#)
- ☐ Adjust
⇒ ["1.9 Setting the shift mechanism", page 97](#)
- ☐ as of 11.2006 the attachment of the control cable in the shift housing is modified



3 - Bush for selector cable

- ☐ from 11.2006

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4 - Shift housing

5 - Circlip

- ☐ do not damage cables when removing
- ☐ Replace after disassembly

6 - 20 Nm

- ☐ 3 units
- ☐ for cable support

7 - Cable support

- ☐ made out of plastic or metal

8 - Grommet

- ☐ Mounting of cable support to gearbox

9 - Spacer

10 - Cable lock

- ☐ for selector cable to relay lever
- ☐ do not interchange, cable locks for selector cable at relay lever and for shift cable at gearshift lever are different, assignment ⇒ [page 92](#)
- ☐ After installing, set shift mechanism ⇒ [“1.9 Setting the shift mechanism”, page 97](#)
- ☐ as of 06.2007 it is fitted together with plastic relay lever
- ☐ remove from plastic relay lever ⇒ [“1.9 Setting the shift mechanism”, page 97](#)

11 - Cable lock

- ☐ for shift cable to gearbox shift lever
- ☐ do not interchange, cable locks for selector cable at relay lever and for shift cable at gearshift lever are different, assignment ⇒ [page 92](#)
- ☐ After installing, set shift mechanism ⇒ [“1.9 Setting the shift mechanism”, page 97](#)

12 - Circlip

- ☐ Replace after disassembly
- ☐ is not required for cable lock for selector cable at relay lever, if relay lever is made of plastic

13 - Circlip

- ☐ Replace after disassembly
- ☐ is not required. if the relay lever is made of plastic

14 - Bushing

- ☐ is not required. if the relay lever is made of plastic

15 - Relay lever

- ☐ Fitting position ⇒ [page 92](#)
- ☐ After installing, set shift mechanism ⇒ [“1.9 Setting the shift mechanism”, page 97](#)
- ☐ as of 06.2007 the relay lever is made of plastic
- ☐ Removing and installing plastic relay lever together with cable lock
⇒ [“1.8 Repairing shift mechanism”, page 92](#)
- ☐ If the relay lever is made of plastic. neither the bushings pos. 14 nor the lock washer pos. 12 are required

16 - Sliding shoe

17 - 23 Nm

- ☐ Replace after disassembly

18 - Gearshift lever

- ☐ with balancing weight
- ☐ insert in such a way that the interrupted spacing of the teeth matches the gearshift shaft
- ☐ Fitting position ⇒ [page 92](#)
- ☐ After installing, set shift mechanism ⇒ [“1.9 Setting the shift mechanism”, page 97](#)
- ☐ As of 06/2006, the diameter of the fixing bolts is smaller ⇒ [page 92](#)

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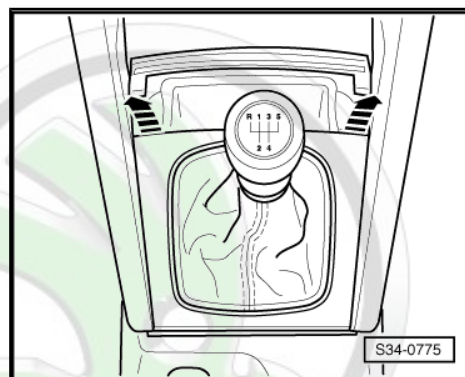
1.6 Removing and installing gear knob

⇒ "1.6.1 Removing and installing gear shift knob, Octavia II", page 84

⇒ "1.6.2 Removing and installing gear shift knob, Octavia III", page 84

1.6.1 Removing and installing gear shift knob, Octavia II

- Lever the collar upwards and out of centre console surround -arrows-.
- Pull collar upwards, inside out over gear knob.

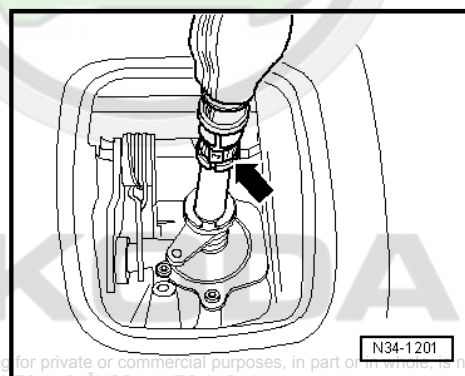


- Open clamp -arrow- and pull off gearshift knob together with the collar.

Installing

- Turn collar inside out.
- Insert gearshift knob and collar and compress new collar clamp -arrow-.

When inserting the gearshift knob on the shift lever the gearshift knob must lock into the round slot of the gearshift lever.



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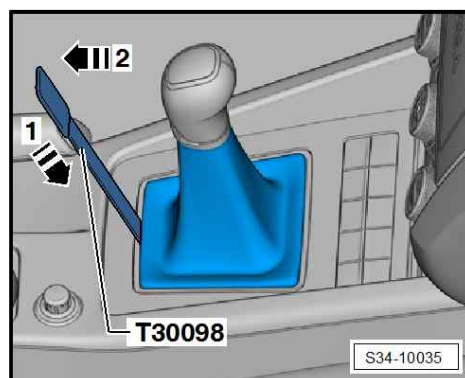
1.6.2 Removing and installing gear shift knob, Octavia III

Special tools and workshop equipment required

- ◆ Release tool - T30098-
- ◆ Hose strap pliers , e.g. -V.A.G 1275-

Removing

- Insert the release tool - T30098- at the rear centrally in the gap between the decorative frame and the collar for the shift lever -arrow 1-.
- Carefully lever the collar for the shift lever out of the centre console -arrow 2- using the release tool - T30098- .
- Pull collar upwards, inside out over gear knob.

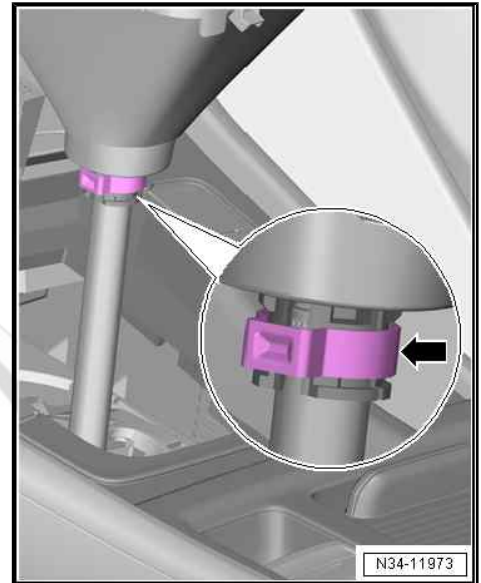


- Open clamp -arrow- and pull off gearshift knob together with the collar.

Installing

Installation is performed in the reverse order, while paying attention to the following:

- Press the gearshift knob together with the collar as far as the stop onto the shift lever.
- Attach gearshift knob with new clamp -arrow- onto gearshift lever using hose binding claw .



1.7 Removing and installing selector mechanism

⇒ [“1.7.1 Removing and installing shift mechanism, Octavia II”, page 85](#)

⇒ [“1.7.2 Removing and installing shift mechanism, Octavia III”, page 89](#)

1.7.1 Removing and installing shift mechanism, Octavia II

Special tools and workshop equipment required

- ◆ Grease - G 000 450 02-
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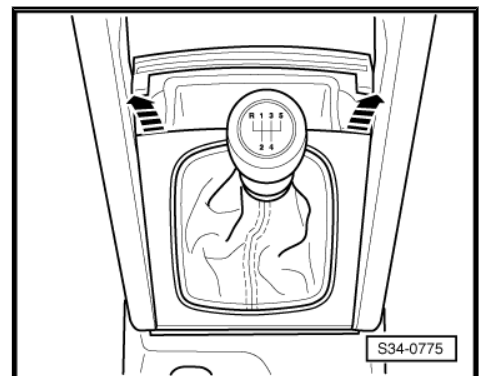
Removing



Note

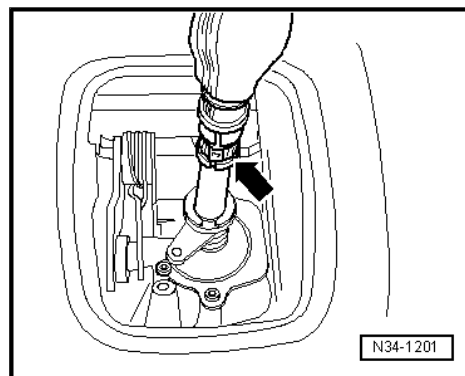
If the battery earth strap is disconnected and connected, carry out additional operations ⇒ Electrical System; Rep. gr. 27 .

- Disconnect the battery-earth strap with the ignition off ⇒ Electrical System; Rep. gr. 27 .
- Remove air filter ⇒ Engine; Rep. gr. 24 .
- Lever the collar upwards and out of centre console surround -arrows-.

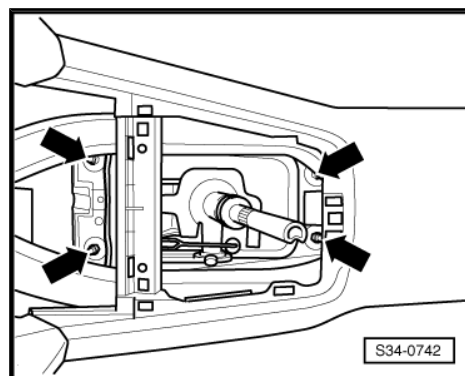




- Open clamp -arrow- and pull off gearshift knob together with the collar.
- If present, detach the noise insulation.
- Removing ashtray ⇒ Body Work; Rep. gr. 68 .



- Unscrew nuts -arrows- attaching the shift housing.



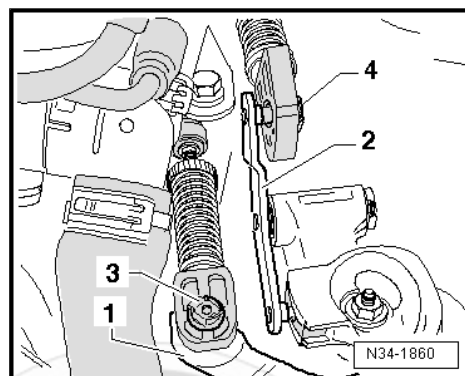
- Remove lock washer -3- for the shift cable from the shifter shaft lever -1-.

Metal relay lever

- Remove circlip -4- for selector cable from relay lever -2-.
- Remove selector cable and shift cable from the studs.

Plastic relay lever

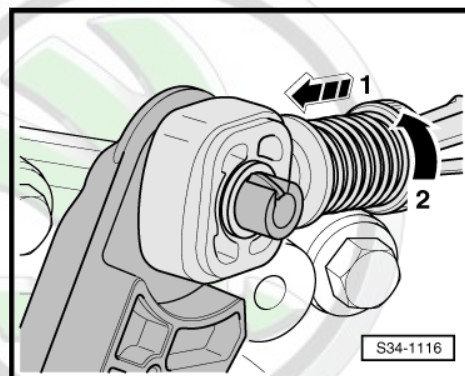
- Pull off the shift cable from the stud.
- In order to avoid damage to the selector cable, the cable lock must be separated from the selector cable before removal.



- Pull forward the locking mechanism as far as the stop in -direction of arrow 1-, then lock by turning to the left in -direction of arrow 2-.

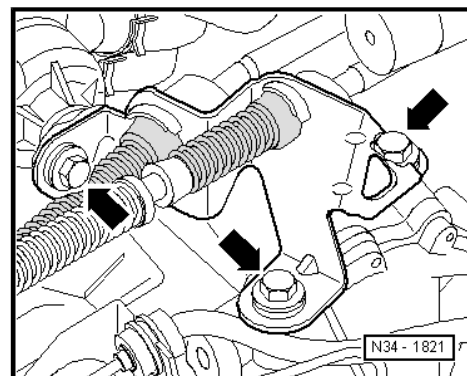
- Remove relay lever together with cable lock
⇒ [“1.8 Repairing shift mechanism”, page 92](#) .

Continued for all vehicles

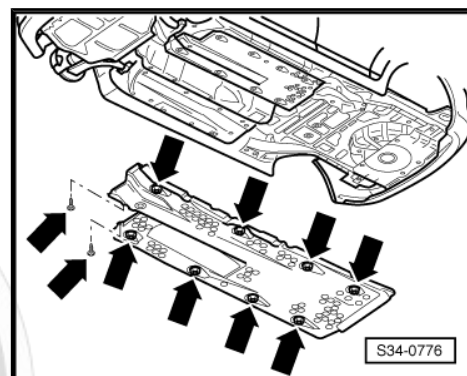


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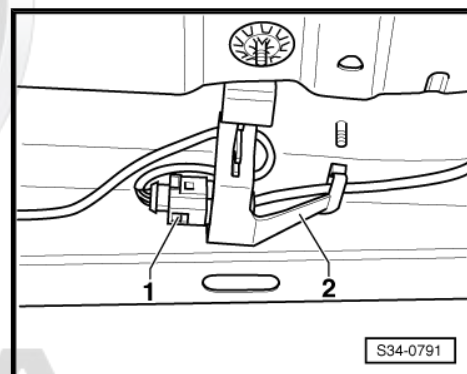
- Disconnect the Bowden cable support from gearbox -arrows-.
- If present, remove the sound dampening system ⇒ Body work; Rep. gr. 50 .



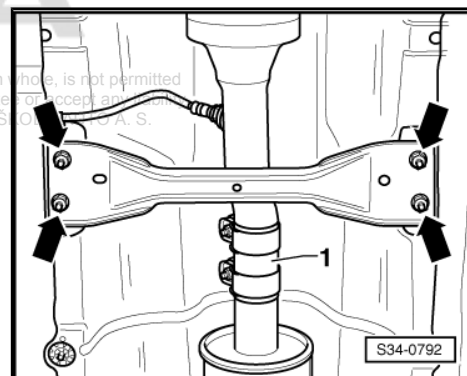
- Remove underbody cover on right and left -arrows-.
- Detach tunnel bridges below the exhaust system ⇒ Engine; Rep. gr. 26 .



- Disconnect plug connection -1-, remove push-fit coupling out of the bracket -2- and expose wiring to lambda probe heater downstream of catalytic converter.



- Separate exhaust system at the double clamp -1-.
- Unhook front and rear silencer ⇒ Engine; Rep. gr. 26 .



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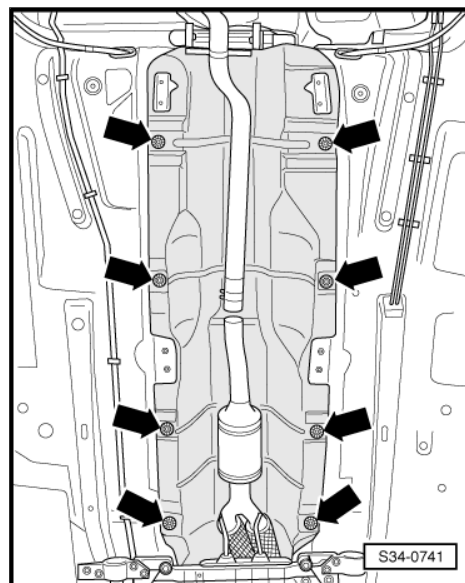


- Clip off clips -arrows- and remove heat shield.
- Swivel shift housing down and remove with control cables.

Installing

Installation is performed in the reverse order, pay attention to the following points:

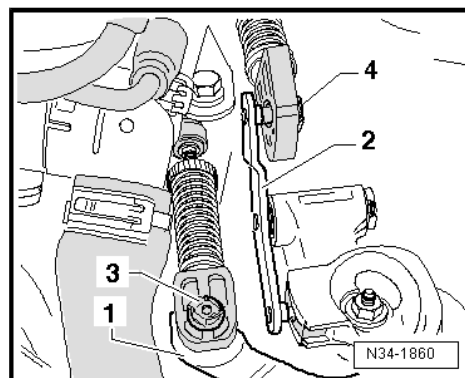
The holes in the cable locks have different diameters
⇒ [page 92](#)



- Apply a small quantity of grease - G 000 450 02- onto the studs of the gearbox shift lever -1- and of the relay lever -2-.
- Always replace lock washers -3- and -4- after each removal ⇒ Electronic Catalogue of Original Parts .
- Secure the shift cable with the lock washer -3- and the selector cable with the lock washer -4- (for metal relay lever).

Cable lock with plastic relay lever

- The relay lever and the cable lock must be installed together ⇒ [“1.8 Repairing shift mechanism”, page 92](#) .
- Insert the selector cable into the cable lock.



Continued for all gearshift mechanisms

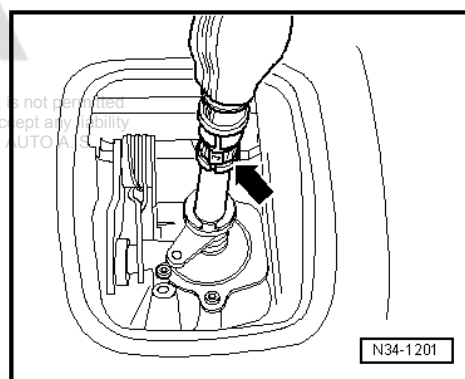
- Align shift housing parallel to vehicle body.
- The distance to the vehicle body must be the same on both sides.
- Installing ashtray ⇒ Body Work; Rep. gr. 68 .
- Replace clamp -arrow- ⇒ Electronic Catalogue of Original Parts .
- Assemble exhaust system free of stress and attach tunnel bridges ⇒ Engine; Rep. gr. 26 .
- Install the noise insulation ⇒ Body Work; Rep. gr. 50 .
- Setting the shift mechanism ⇒ [“1.9 Setting the shift mechanism”, page 97](#) .
- Install air filter ⇒ Engine; Rep. gr. 24 .



Note

After the battery earth strap is disconnected and connected, carry out additional operations ⇒ Electrical System; Rep. gr. 27 .

- Connect earth strap of battery while paying attention to the notes in the ⇒ Electrical System; Rep. gr. 27 .



Tightening torque

Component	Nm
Shift housing to body	⇒ "1.4 Summary of components - shift lever and shift housing", page 74
Cable support to gearbox	⇒ "1.5 Summary of components - control cables", page 80
Underbody cover	⇒ Body Work; Rep. gr. 50

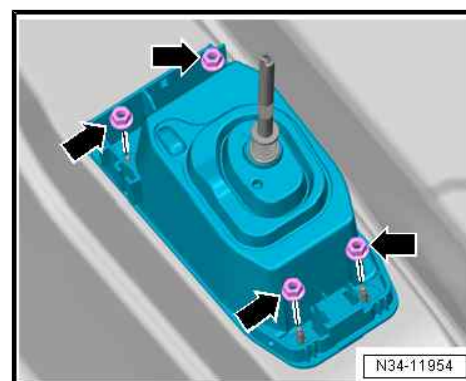
1.7.2 Removing and installing shift mechanism, Octavia III

Removing

- Disconnect battery earth strap ⇒ Electrical system; Rep. gr. 27 ; Battery; Disconnecting and connecting battery .
- Remove gear knob with gaiter
⇒ "1.6 Removing and installing gear knob", page 84 .
- Remove centre console ⇒ General body repairs, interior; Rep. gr. 68 ; Centre console; remove and install centre console .
- Remove tract to the rear seats in the footwell.

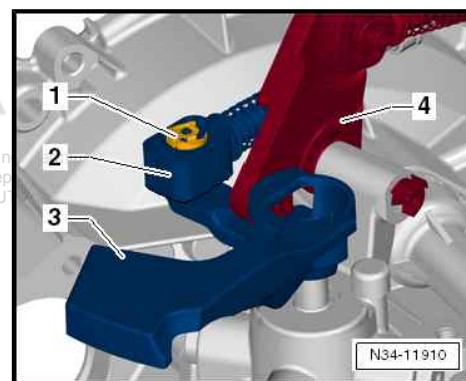
Installation position for noise insulation and nuts -arrows- for shift housing

- Unscrew nuts -arrows- attaching the shift housing.



Remove shift cable and gate selector cable with lock

- Remove safety mechanism -1- for cable end-piece for gear selector cable -2- and remove cable end-piece for gear selector cable with attached gear selector cable from the pin of gearbox selector lever -3-.
- Remove the cable end-piece for gate selector cable together with the relay lever -4- ⇒ page 96 .





- Disconnect the Bowden cable support from gearbox -arrows-.



Caution

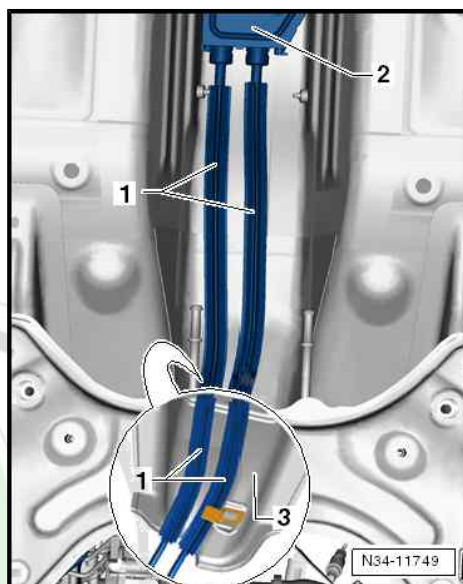
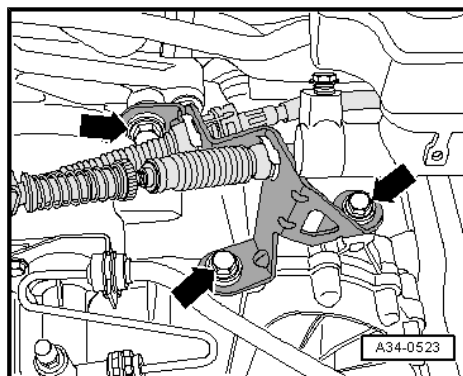
There is a risk of damaging the decoupling element in the pre-exhaust pipe should not be bent by more than 10°.

- Remove the exhaust system underneath the switch actuation.
⇒ Rep. gr. 26 ; Silencer/muffler; Remove and install rear part of exhaust system .
- Remove the heat shield under the shift mechanism.
- Swivel shift housing down and remove with selector cables.

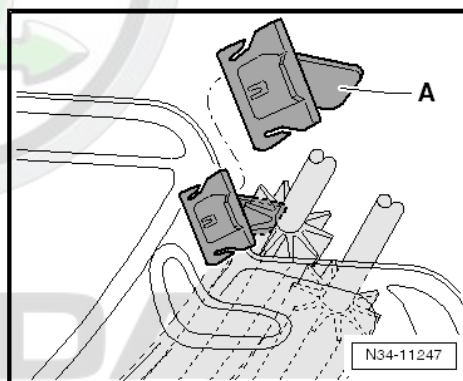
Installing

Installation is carried out in the reverse order; pay attention to the following points:

- Align selector housing parallel to body and screw tightly.
- The distance to the vehicle body is the same on both sides.
- Lay the shift cable and selector cable from the selector housing -2- to the gearbox.
- The control cables -1- must run parallel to one another and not cross each other.
- The cables must be laid in the intended indentation in heat shield -3-.



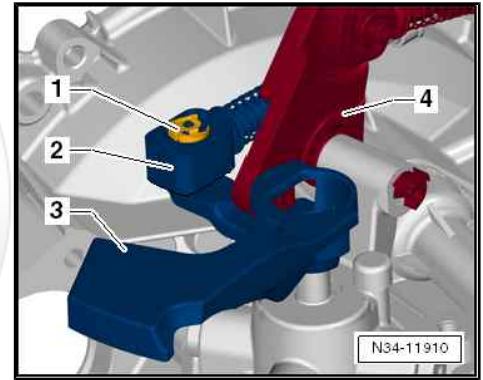
Clip -A- holds cables and heat shield together in position.



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The holes in the cable locks have different diameters, assignment
⇒ [page 94](#)

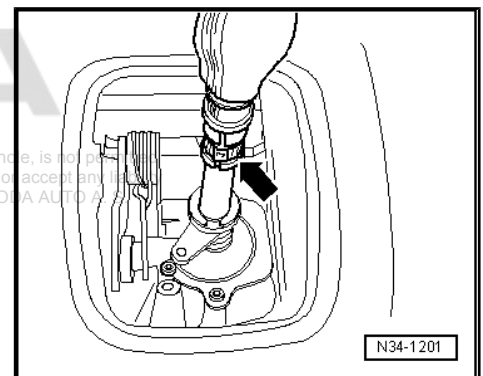
- Apply a small quantity of grease onto the studs of the gearbox shift lever -3- and of the relay lever -4- ⇒ [page 96](#) .
- Assign the grease via the ⇒ Electronic Catalogue of Original Parts .
- Install cable end-piece for gear selector cable -2- and lock with a new securing mechanism -1-.
- Install relay lever -4- together with cable end-piece for relay lever ⇒ [page 96](#) .
- Insert the gate selector cable for the cable end-piece for gate selector cable to the relay lever.
- Install centre console ⇒ Body assembly work inside; Rep. gr. 68 ; centre console ,



i Note

Replace clamp -arrow-.

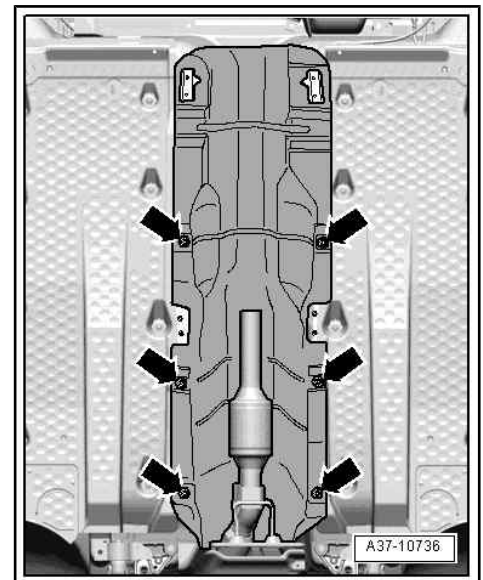
- Installing collar with gear shift knob
⇒ ["1.6 Removing and installing gear knob", page 84](#) .
- Setting the shift mechanism
⇒ ["1.9 Setting the shift mechanism", page 97](#) .



- Install the heat shield.
- Assemble exhaust system tension-free ⇒ Rep. gr. 26 ; Exhaust pipes / silencers; Set exhaust system tension-free assembly and installation of tunnel bridges ⇒ Bodywork - exterior assembly work; Rep. gr. 66 ; boards/ panels/ extensions / claddings; Assembly overview - heat protection plate ,
- Remove battery and battery tray ⇒ Electrical system; Rep. gr. 27 ; Battery; Removing and installing battery tray .

Tightening torques

- ◆ ⇒ ["1.4 Summary of components - shift lever and shift housing", page 74](#)





1.8 Repairing shift mechanism

⇒ "1.8.1 Repairing the shift mechanism, Octavia II", page 92

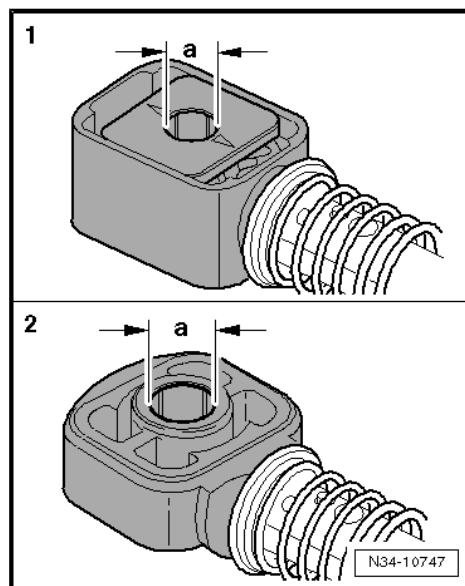
⇒ "1.8.2 Repairing the shift mechanism, Octavia III", page 94

1.8.1 Repairing the shift mechanism, Octavia II

Assign cable locks

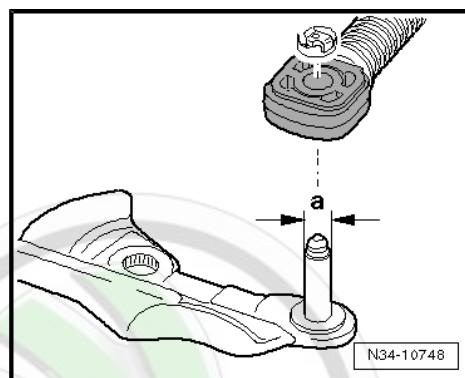
The holes in the cable end-pieces have different diameters.

Cable lock	Dimension "a"
1 - as of 06.2006 - Shift cable at gearbox shift lever	8.5 mm
2 - until 05.2006 - Shift cable at gearbox shift lever	10 mm
2 - Selector cable at relay lever	8 mm
2 - Selector cable at plastic relay lever	10 mm



As of 06.2006 the diameter of the fixing bolts is smaller

Fixing bolts	Dimension "a"
until 05.2006 - Shift cable at gearbox shift lever	10 mm
as of 06.2006 - Shift cable at gearbox shift lever	8.5 mm

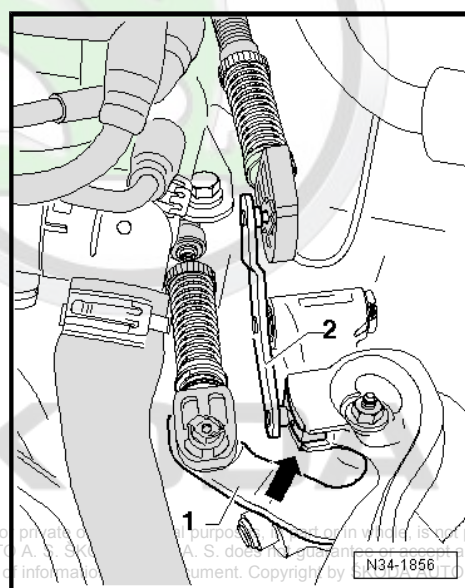


Fitting location of gearbox shift lever/relay lever

1 - Gearbox shift lever with balancing weight

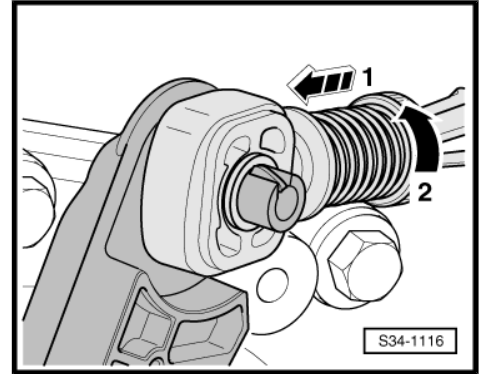
2 - Relay lever is inserted over the sliding shoe -arrow- into the sliding rail of the gearbox shift lever

Removing and installing plastic relay lever as of 06.2007



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- Pull forward the locking mechanism as far as the stop in -direction of arrow 1-, then lock by turning to the left in -direction of arrow 2-.
- In order to avoid damage to the selector cable, the cable lock must be separated from the selector cable before removal.
- The shifter shaft lever is in neutral position.



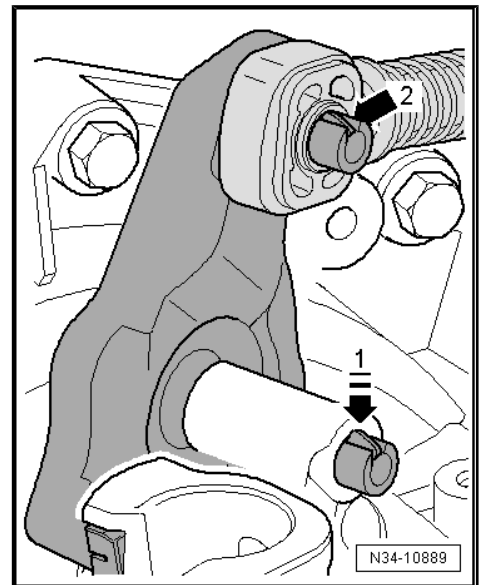
The relay lever is secured with a catch -arrow 1- on the gearshift cover

- Carefully press the catch -arrow 1- up to the stop towards the bottom.
- Afterwards move relay lever in its bearing point back and forward (direction of operation). To do so, carefully pull out the cable lock.
- Only remove cable lock on removed relay lever ➔ [page 94](#)

 Note

To install, grease bearing points and friction surfaces with grease - G 000 450 02- .

- Press cable lock onto the relay lever ➔ [page 94](#)
- Insert relay lever together with cable lock.
- The catch -arrow 1- secures the relay lever.
- The cable lock must be located behind the catch -arrow 2-.



The relay lever is secured with a clip -arrow 1- on the gearshift cover

- Remove the clip -arrow 1- from the opening in the relay lever.
- Pull the relay lever out of its bearing point in the gearshift cover together with the cable lock.
- Only remove cable lock on removed relay lever ➔ [page 94](#) .

 Note

To install, grease bearing points and friction surfaces with grease - G 000 450 02- .

- Press cable lock onto the relay lever ➔ [page 94](#)
- Insert relay lever together with cable lock.
- Secure the relay lever with a clip -arrow 1-.

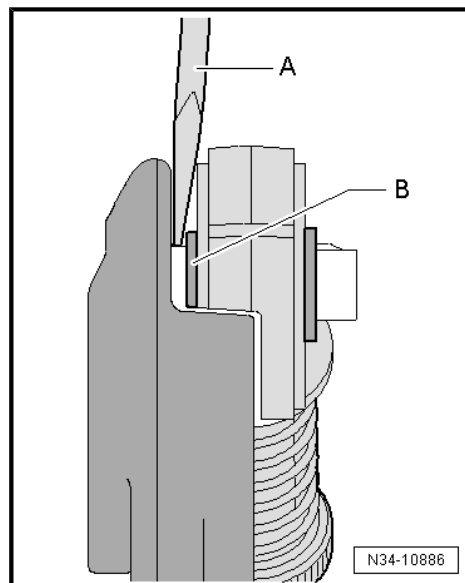
Remove and install cable lock for selector cable from plastic relay lever





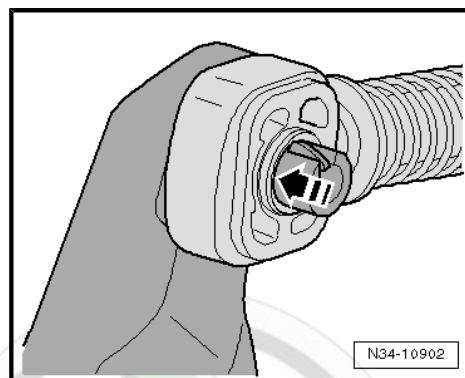
Lever off cable lock for selector cable from plastic relay lever

- Relay lever removed.
- Insert a flat-blade screwdriver -A- between bush -B- and relay lever.



Press on cable lock

- Relay lever removed.
- Cable end-piece may be pressed only onto bush -arrow-.
- Cable lock must move freely on relay lever.
- It must be located behind the catch ⇒ [page 93](#) .

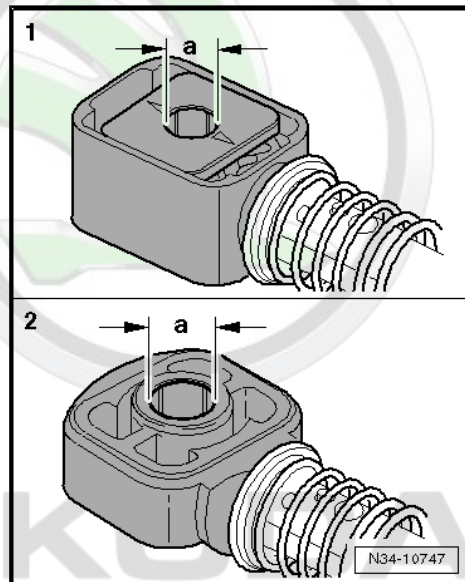


1.8.2 Repairing the shift mechanism, Octavia III

Assign cable locks

The holes in the cable end-pieces have different diameters.

Cable lock	Dimension "a"
-1- Shift cable at gearbox shift lever	8.5 mm
-2- Selector cable at relay lever	10 mm

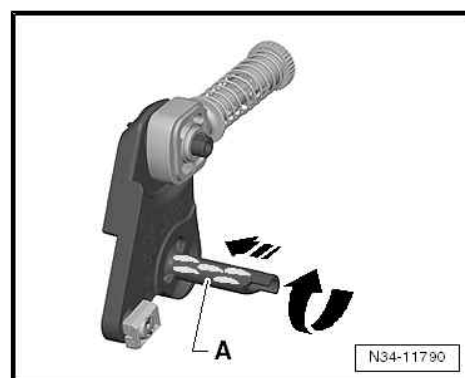
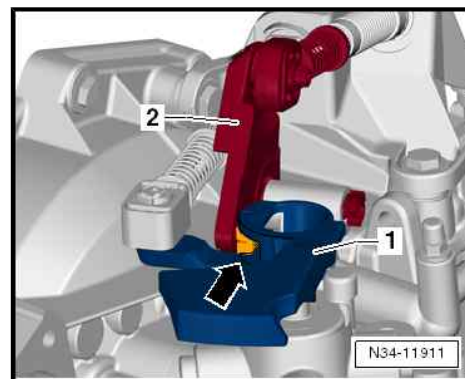


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Installation position of gearbox selector lever and relay lever

1 - Gearshift lever

2 - Relay lever is inserted over the sliding shoe -arrow- into the sliding rail of the gearbox shift lever

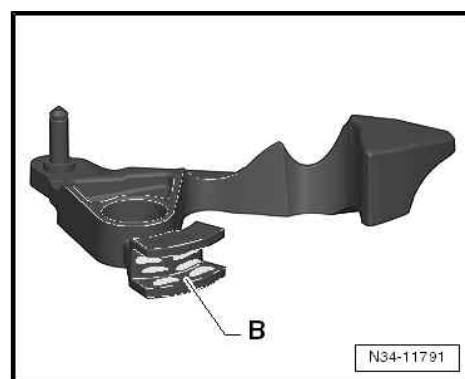


- During installation, the following areas in particular must be greased thoroughly:
- Shaft -A- of the relay lever -arrows-.
- Apply grease to guide rail -B- of gearbox selector lever in which the shoe of the relay lever engages.
- Mounting bolts for cable lock



Note

- ◆ Assign the grease via the ➔ *Electronic Catalogue of Original Parts*.
- ◆ The picture of the gearbox selector lever and relay lever may differ from the original part.



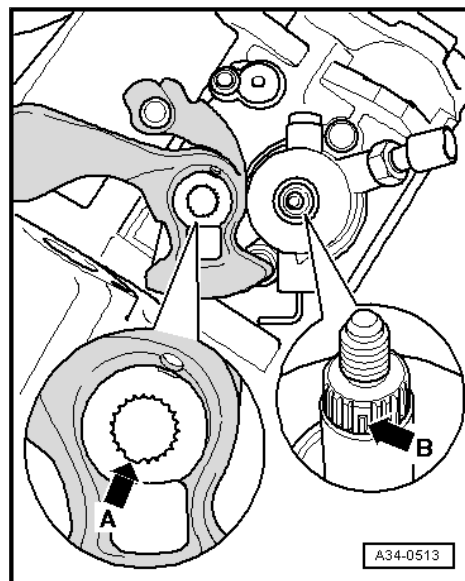
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Install gearbox selector lever

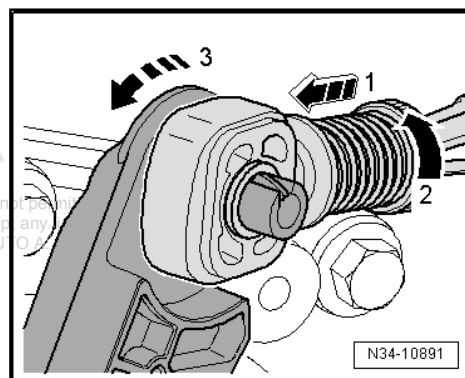
- When positioning the gearshift lever, make sure that the tooth opening -arrow A- is located above the interrupted spacing of the teeth for the gearshift shaft -arrow B-.



Removing and installing relay lever

- Press the safety mechanism on the cable lock for the selector cable forwards in the -direction of the arrow 1- until the stop, afterwards lock it by turning to the left in the -direction of the arrow 2- so that the gate selector cable remains loose.

- Turn the relay lever towards the front in the -direction of the arrow 3- and separate the cable end-piece from the gate selector cable.



- Pull off clip -arrow 1- and remove relay lever together with cable end-piece for the gate selector cable.

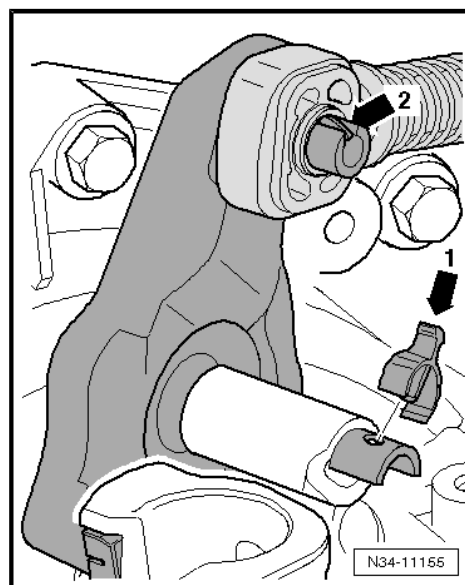


Note

- ♦ Cable end-piece for gate selector cable must be located behind catch -arrow 2-.
- ♦ It is only permissible to remove cable end-piece for gate selector cable after the disassembled relay lever has been removed ⇒ [page 97](#).

Installing

- Press cable end-piece for gate selector cable onto relay lever ⇒ [page 97](#).
- Insert the relay lever with attached cable end-piece for gate selector cable as far as the stop.
- Secure the relay lever with a clip -arrow 1- (⇒ previous figure).

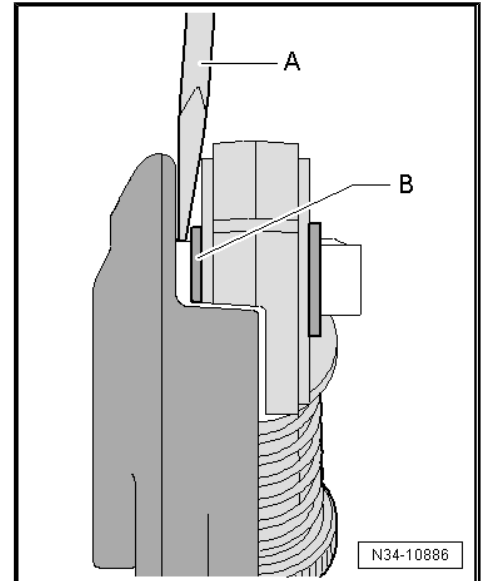


Note

- ♦ Ensure proper engagement of clip.
- ♦ Cable end-piece for gate selector cable must be located behind catch -arrow 2- (⇒ previous figure).

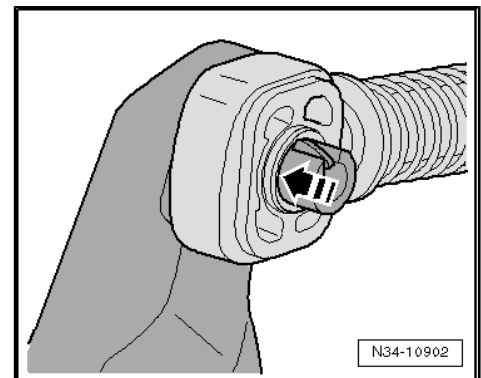
Lever out cable end-piece for gate selector cable from the relay lever while the gate selector cable is disconnected.

- The relay lever has been removed.
- Insert a flat-blade screwdriver -A- between bush -B- and relay lever.



Press cable end-piece for gate selector cable onto relay lever

- The relay lever has been removed.
- The bolt for the cable end-piece for gate selector cable must be greased ⇒ Electronic Catalogue of Original Parts .
- The cable lock must only be pressed onto the bushing -arrow-.
- The cable lock must move freely on the relay lever.
- Cable end-piece must be located behind catch -arrow 2-.
⇒ [page 96](#)
- Pay attention to secure catch.



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1.9 Setting the shift mechanism

⇒ ["1.9.1 Setting shift mechanism, Octavia II", page 97](#)

⇒ ["1.9.2 Setting shift mechanism, Octavia III", page 99](#)

1.9.1 Setting shift mechanism, Octavia II

Special tools and workshop equipment required

- ♦ Rig pin - T10027A-



Note

The following points are essential to ensure correct adjustment of selector mechanism:

- Gearbox, clutch and clutch control in perfect condition
- Shift mechanism operates freely
- Control elements and transmission elements of the shift mechanism are in perfect condition
- Gearbox in Neutral
- Remove air filter ⇒ Engine; Rep. gr. 24 .



- Pull forward the locking mechanism at shift cable and at selector cable as far as the stop in -direction of arrow 1-, then lock by turning to the left in -direction of arrow 2-.



Note

The cables can be moved in the catches.

Fix the gearshift shaft as follows:

- Press down the gearshift shaft in -direction of arrow 1-.
- When pressing down the gearshift shaft turn angle lever -A- in -direction of arrow 2- and at the same time press it in carefully until it locks into the gearshift shaft.

This locks the gearshift shaft and can no longer be moved.

- Make sure that the shift cable and selector cable sit stress-free in the catches.
- Open the ashtray.
- Lever the collar upwards and out of centre console surround -arrows-.
- If present. remove the noise insulation.

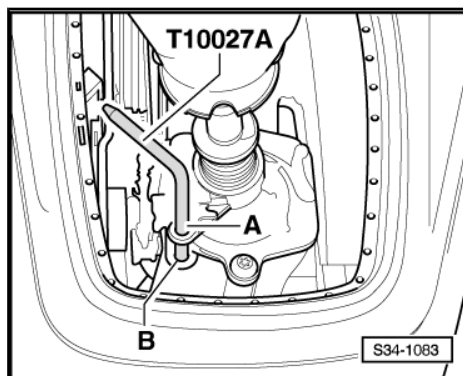
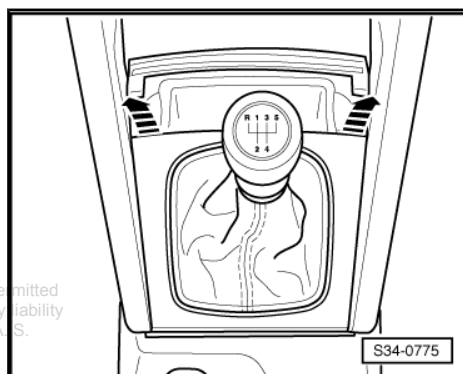
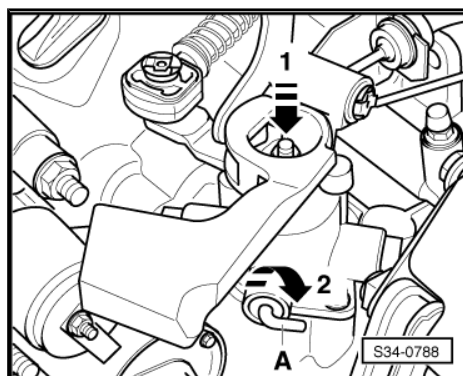
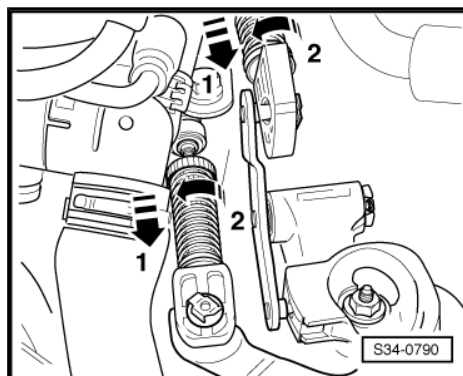
Fix the gearshift lever as follows:

- Push shift lever in neutral position to the left into the 1st/2nd gear gate.

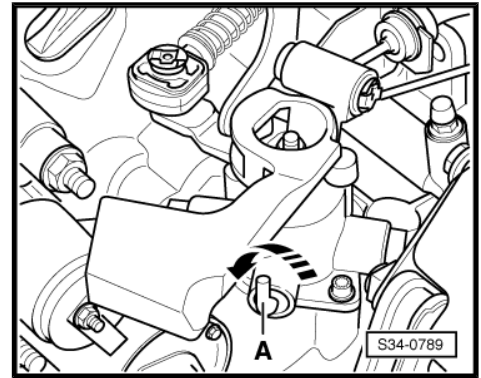
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- Insert rig pin - T10027A- through hole -A- into hole -B-.
- Turn locking mechanism at shift cable and at selector cable to the right up to the stop.

The spring pushes the locking mechanism into the initial position.



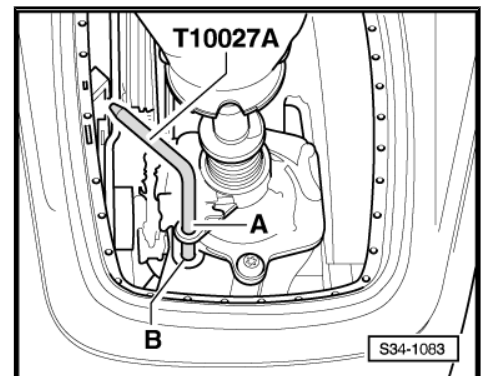
- Turn the angle lever -A- back to the initial position -in direction of arrow-.
- The angle must point vertically upwards.



- Pull rig pin - T10027A- out of hole -A- and -B-.
- If present. install the noise insulation.
- Press collar into the cover.
- Install air filter ⇒ Engine; Rep. gr. 24 .

Check function

- The shift lever must be positioned in Neutral position in the selector gear of the 3rd/4th gear.
- Depress clutch.
- Select all gears several times. Pay particular attention to proper operation of the reverse gear lock.



If the difficulty in engaging a gear persists after repeated attempts, repeat adjustment procedure of selector mechanism

⇒ ["1.9 Setting the shift mechanism", page 97](#) .

1.9.2 Setting shift mechanism, Octavia III

Special tools and workshop equipment required

- ◆ Release tool - T30098-
- ◆ Rig pin - T10027A-

Setting conditions



Note

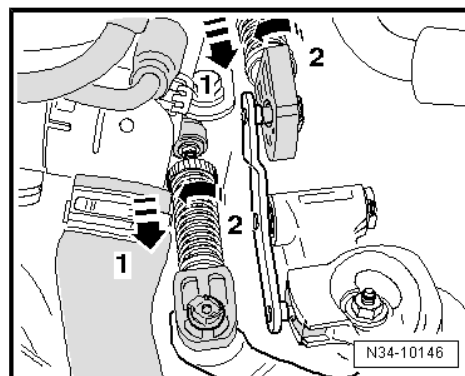
The following points are essential to ensure correct adjustment of selector mechanism:

- Gearbox, clutch and clutch control in perfect condition
- Shift mechanism operates freely.
- Operating and transmission elements of the shift mechanism are in perfect condition
- Gearbox must be in neutral.

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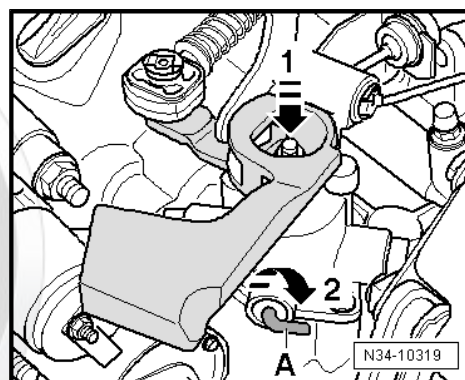
**Work procedure**

- Pull forward the locking mechanism at shift cable lock and at gate selector cable as far as the stop in -direction of arrow 1-, then lock by turning to the left in -direction of arrow 2-.



Lock gearshift shaft as follows:

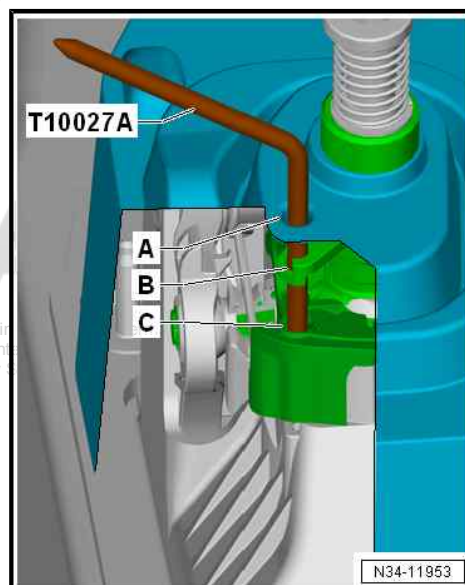
- Press down the gearshift shaft in -direction of arrow 1-.
- Press down gearshift shaft, turn the angle -A- in -direction of arrow 2- and at the same time press it in so that it engages in the gearshift shaft.



- Removing the shift lever collar from the central console
⇒ [“1.6 Removing and installing gear knob”, page 84](#) .
- Put shift lever collar up over the gear shift knob.

Lock gearshift lever as follows:

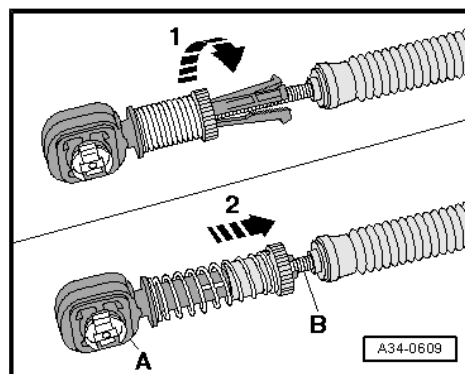
- With gearshift lever, put gear into Neutral and where necessary press the shift lever which is pressed to the left.
- Insert the rig pin - T10027 A- through the noise insulation -A- and the bore -B- into bore -C-.



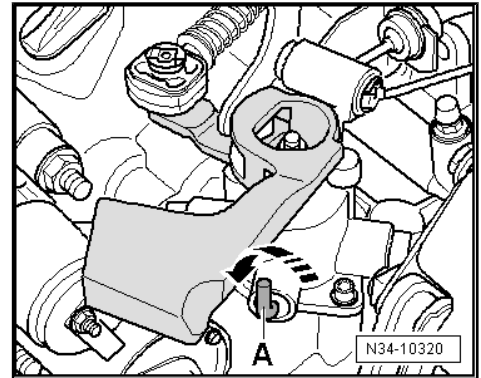
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- Ensure that the selector and shift cable -B- are pushed free of tension into the catches -A-.
- Turn the locking mechanism at the shift cable from the shift cable and selector cable to the right as far as the stop in -direction of arrow 1-.

The spring presses the locking mechanism into original position -direction of arrow 2-.



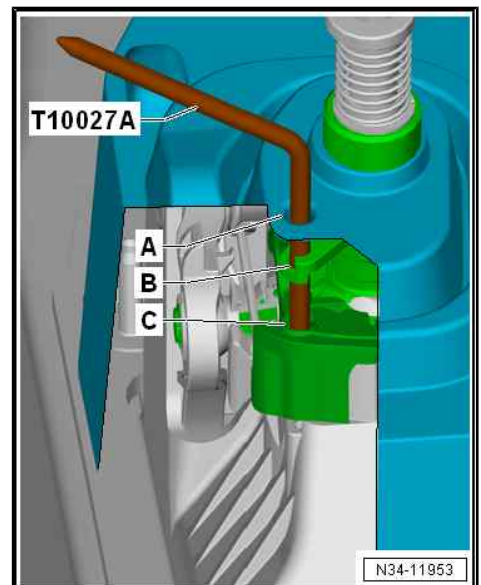
- Turn angle -A- back to the initial position in -direction of arrow 2-.
- The angle lever -A- must be pressed out of the gearbox in -direction of arrow-.



- Remove rig pin from the noise insulation -A- and bores -B- and -C-.
- Install shift lever collar
⇒ [“1.6 Removing and installing gear knob”, page 84](#) .
- Check selector shaft can move freely.

Inspecting the gearshift mechanism

- Shift lever must be positioned in Neutral position in gate of the 3rd/4th gear.
- Depress clutch.
- Shift through all gears several times. Pay particular attention to proper operation of the reverse gear lock.
- If a gear catches when engaged again, set the shift mechanism once again
⇒ [“1.9 Setting the shift mechanism”, page 97](#) .

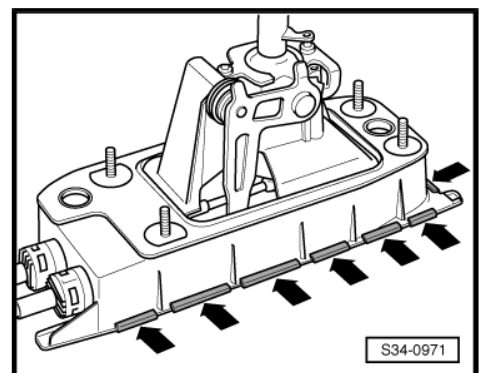


1.10 Removing and installing bellcrank cable pull

Removing

- Removing shift mechanism
⇒ [“1.7 Removing and installing selector mechanism”, page 85](#) .
- Bend up tabs -arrows- of cover for the shift mechanism using a screwdriver and remove cover.
- Remove gasket ring.

Vehicles up to 10/2006

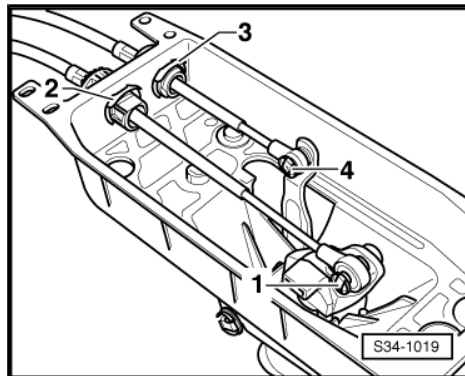


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- Remove circlips -1,2,3,4- and remove shift cable and selector cable from shift housing.

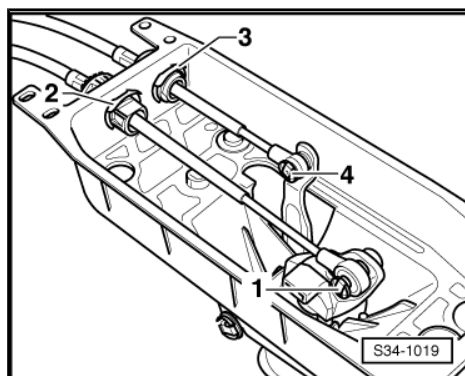
Vehicles as of 11/2006



- Remove lock washers -2 and 3- (lock washers -1 and 4- are no longer available), selector cable and shift cable must be levered off from the gearshift lever or relay lever e.g. with a screwdriver.

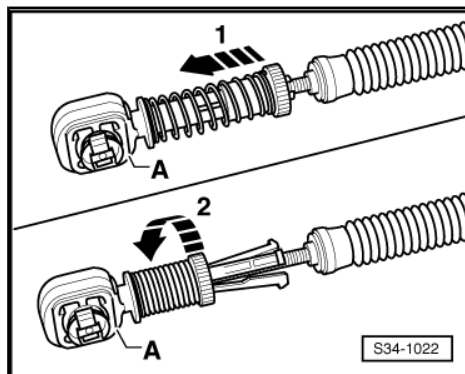
Continued for all vehicles

- Remove shift cable and selector cable from shift housing.



Unlock catches -A- for shift cable and selector cable as follows:

- Slide sliding sleeve forwards up to the stop -arrow 1-.
- Turn sliding sleeve to the right up to the stop -arrow 2- until it locks in place.
- Remove the catches from the cables.

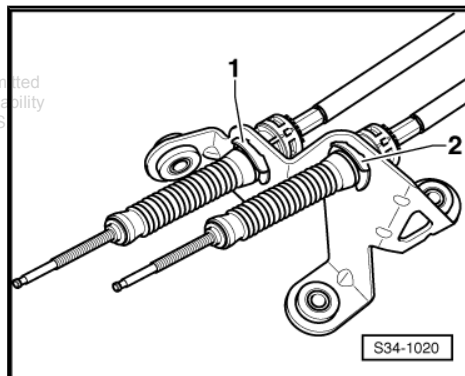


- Remove circlips -1- and -2-.
- Remove the cable support from the cables.

Installing

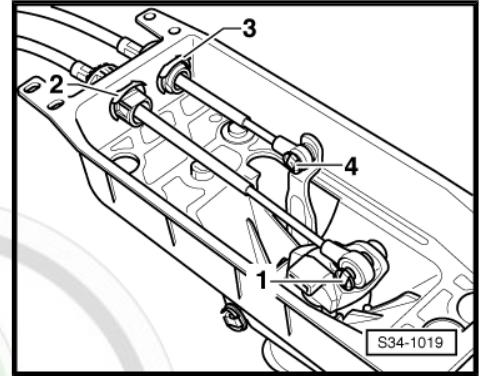
Installation is performed in the reverse order, pay attention to the following points:

Vehicles up to 10/2006



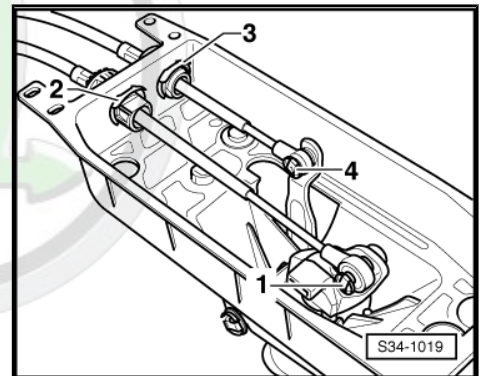
- Attach shift cable and selector cable to shift housing with lock washers -2 and 3-.
- Fasten shift cable and selector cable onto gearshift lever and relay lever in shift housing with lock washers -1 and 4-.

Vehicles as of 11/2006

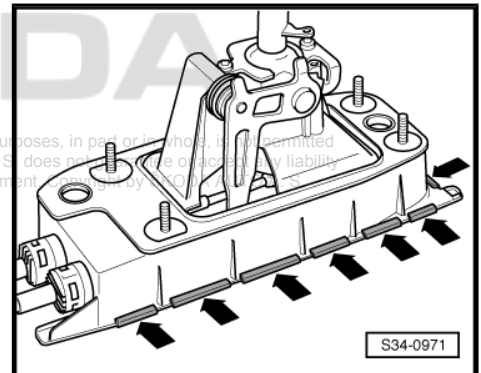


- Attach shift cable and selector cable to shift housing with lock washers -2 and 3-.
- Press shift cable and selector cable onto gearshift lever and relay lever into shift housing (lock washers -1 and 4- are no longer available).

Continued for all vehicles



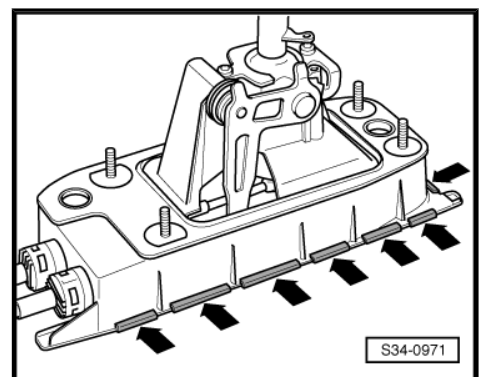
- Install gasket and attach cover for shift mechanism by bending up the tabs -arrows-.
- Installing shift mechanism
⇒ [“1.7 Removing and installing selector mechanism”, page 85](#).
- Setting the shift mechanism
⇒ [“1.9 Setting the shift mechanism”, page 97](#).



1.11 Dismantling and assembling selector mechanism

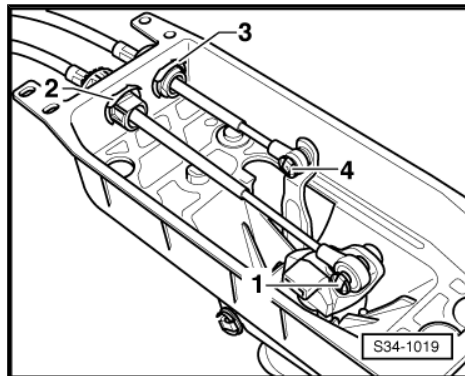
Dismantling

- Removing shift mechanism
⇒ [“1.7 Removing and installing selector mechanism”, page 85](#)
- Bend up tabs -arrows- of cover for the shift mechanism using a screwdriver and remove cover.
- Remove gasket ring.





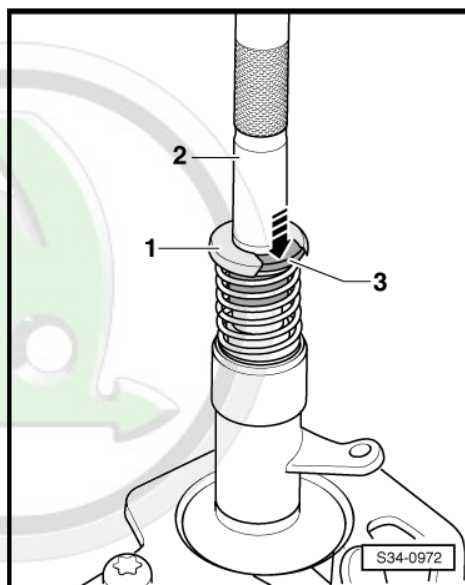
- Remove lock washers -2 and 3- (lock washers -1 and 4- are no longer available), selector cable and shift cable must be levered off from the gearshift lever or relay lever e.g. with a screwdriver.



- Remove shift lever.

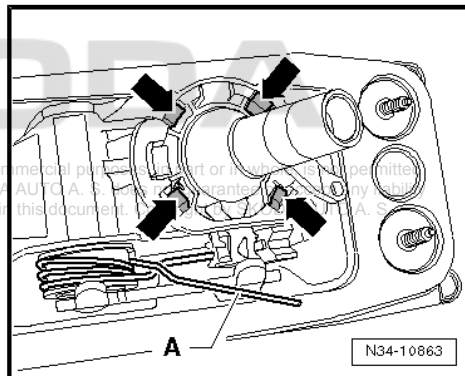
**Note**

- ◆ Hold the gearshift lever -2-.
- ◆ Press spacer sleeve -3- in direction of arrow.
- ◆ Take off circlip -1-.

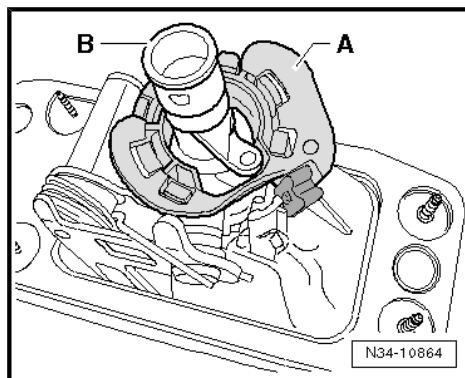


- Offset the top pressure spring arm -A- via the peg of the selector angle.
- Press the catches of the bearing shell -arrows- e.g. with a screwdriver in -direction of arrow- (the catch can break off).

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- Slacken bearing shell -A- and shift lever guide -B- from shift housing.
- Remove bearing shell -A- from shift lever guide -B-.



- Press bottom pressure spring arm -arrow 1- onto shoulder of selector angle.

**Note**

When removing the shift lever guide, the guides -A- must not be damaged.

- Lever the lower leg of the pressure spring up to the stop onto the shoulder at the selector angle plate -direction of arrow 1-.
- Now pull up the shift lever guide as far as the stop and pull the ball stud out of the selector angle plate -direction of arrow 2-.
- Then turn the shift lever guide in -direction of arrow 1-.
- The stud -arrow 2- must be located in the recess of the shift housing.
- Afterwards, swivel out the shift lever guide with shift lever in -direction of arrow 3-.

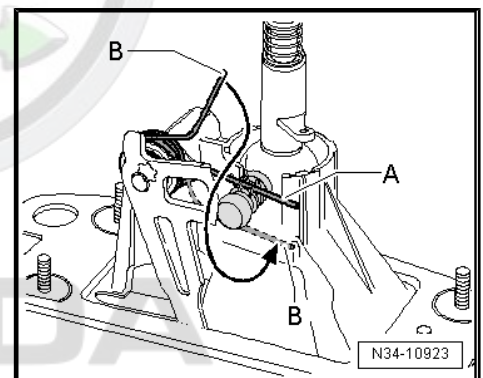
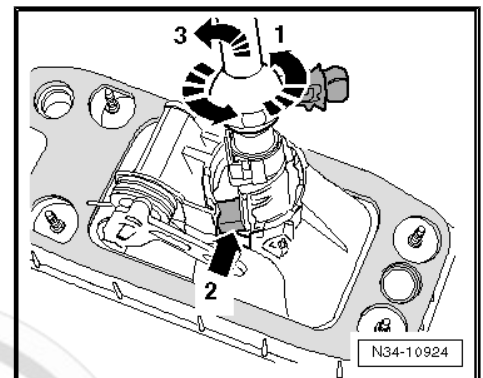
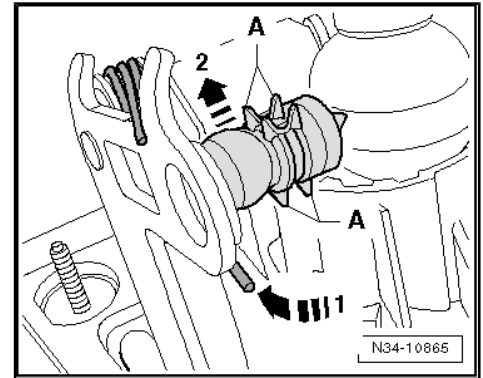
Assembling**Caution**

The lower leg of the pressure spring (➔ [page 105](#)) can jump off uncontrolled from the shoulder of the selector angle during further handling.

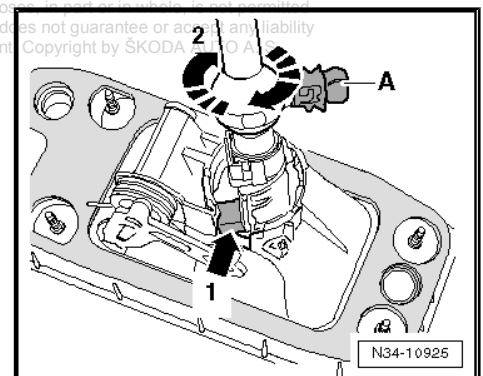
- Thus carefully press down the lower leg from the shoulder of the selector angle plate.

The legs of the pressure spring tighten “crosswise” with a loud noise.

- To slacken, turn around the legs of the pressure spring -A- and -B- towards the right.
- The legs -A- and -B- must point in the opposite direction. Shown here for inserted shift lever guide.



- Insert shift lever guide with shift lever into the shift housing.
- The stud -arrow 1- is still located in the recess of the shift housing.
- Turn shift lever guide in -direction of arrow 2-, until the ball stud -A- is above the recess of the shift housing.





- Position shift housing with shift lever guide into the larger recess -arrow- of the Insert base - T10083- .



Note

If necessary, first of all remove the shift lever so that the shift housing with shift lever guide can be inserted in the insert base .

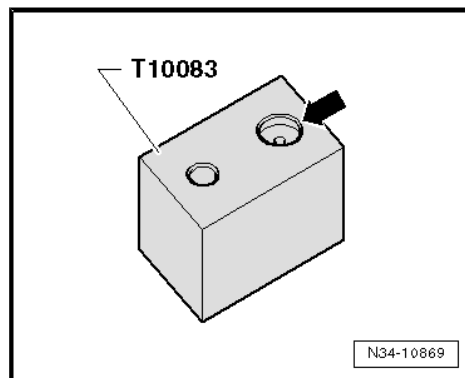
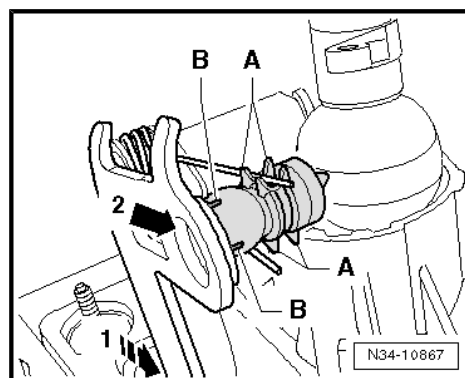
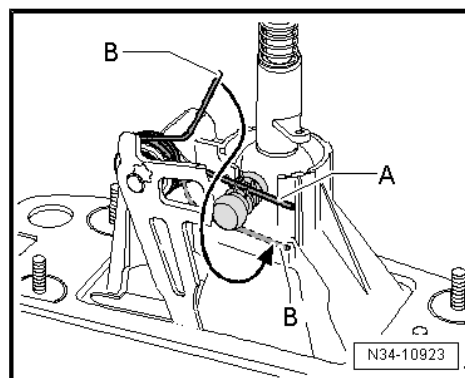
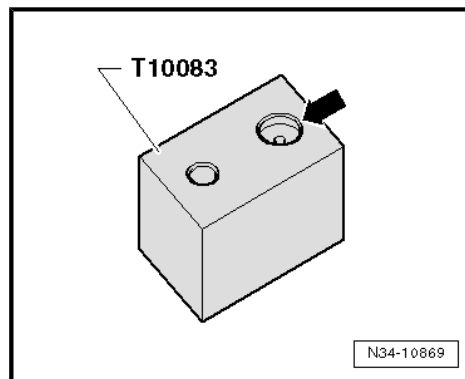
- The shift lever guide must protrude out of the shift housing as far as the stop.
- Insert the leg -A- of the pressure spring from the top into the guide.
- Pull leg -B- of pressure spring downwards and insert the leg -B- next to the guide (in direction of the spherical head).



Note

To provide a clearer illustration, the selector angle plate is only partially illustrated.

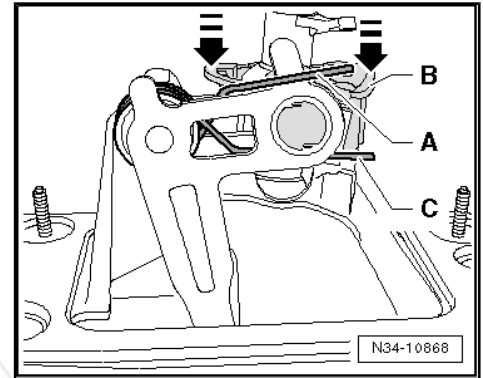
- Carefully remove shift housing with shift lever guide from the insert base - T10083- .
- Move selector angle plate up to stop to the rear (opposite the location holes for shift and selector cable) -direction of arrow 1-.
- Grease the ball stud with grease - G 000 450 02- .
- Press the ball stud into the selector angle plate -arrow 2-.
- The guides -A- and the tabs -B- must not be damaged.



- Position shift housing with shift lever guide into the larger recess -arrow- of the Insert base - T10083- .

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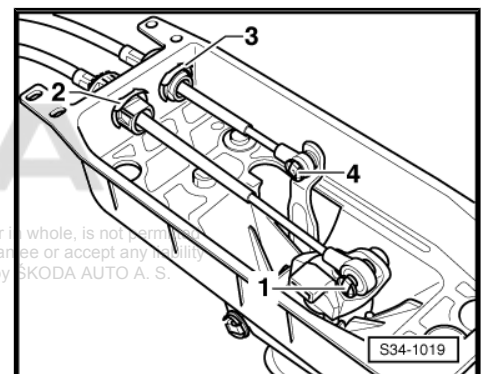
- The shift lever guide must protrude out of the shift housing as far as the stop.
- Lift the upper leg -A- of the pressure spring over the stud of the selector angle plate.
- Use a new bearing shell -B-.
- Grease the bearing shell and the bearing ball of the shift lever guide with grease - G 000 450 02- .
- Press the bearing shell up to stop onto the bearing ball of the shift lever guide.
- Remove shift housing from the insert base - T10083- .
- Press the bearing shell into the shift housing -arrows-.
- All catch pegs must click audibly.
- Insert the lower leg -C- of the pressure spring into the guide.
- Lift the upper leg -A- of the pressure spring over the stud of the selector angle plate into the guide.



 Note

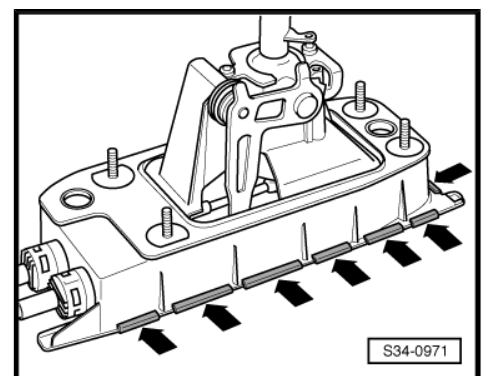
Install the shift lever if it was removed.

- Attach shift cable and selector cable to shift housing with lock washers -2 and 3-.
- Press shift cable and selector cable onto gearshift lever and relay lever into shift housing (lock washers -1 and 4- are no longer available).



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- Install gasket and attach cover for shift mechanism by bending up the tabs -arrows-.
- Installing shift mechanism
⇒ ["1.7 Removing and installing selector mechanism", page 85](#) .
- Setting the shift mechanism
⇒ ["1.9 Setting the shift mechanism", page 97](#) .



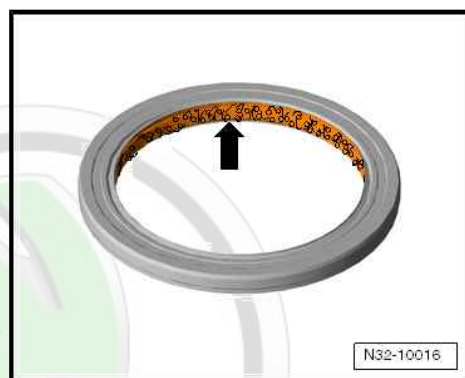
1.12 Replacing the sealing ring for the gear-shift shaft

Special tools and workshop equipment required

- ◆ Pipe section - VW 423-
- ◆ Sealing grease - G 052 128 A1-
- Remove the gearshift lever and relay lever
⇒ ["1.8 Repairing shift mechanism", page 92](#) .

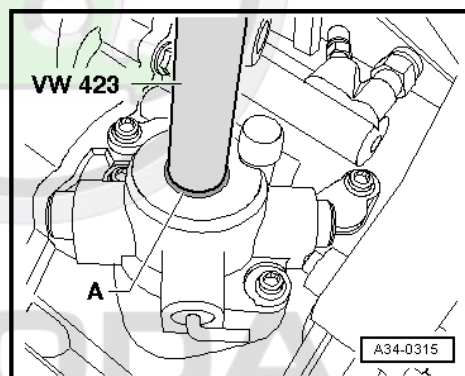


- Lever out gasket ring with a screwdriver.
- Lightly oil new gasket ring at outer surface.
- Fill space between sealing lip and dust lip -arrow- with sealing grease - G 052 128 A1- .



Insert gasket ring -A- up to the stop

- Install the gearshift lever and relay lever
⇒ ["1.8 Repairing shift mechanism", page 92](#) .



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2 Removing and installing the gearbox

⇒ "2.1 Tightening torques for gearbox", page 109

⇒ "2.2 Removing the gearbox", page 110

⇒ "2.3 Installing the gearbox", page 122

2.1 Tightening torques for gearbox

⇒ "2.1.1 Tightening torques for gearbox, Octavia II", page 109

⇒ "2.1.2 Tightening torques for gearbox, Octavia III", page 110

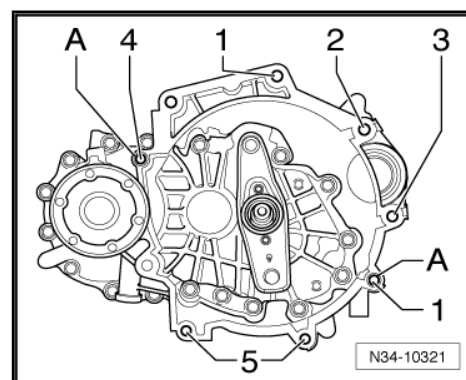
2.1.1 Tightening torques for gearbox, Octavia II

Vehicles with 1.4/55kW and 1.4/59 kW Engine

Position	Screw	Pieces	Nm
1	M12 x 60	2	80
2 ¹⁾	M12 x 135	1	80
3 ¹⁾	M12 x 135	1	80
4	M12 x 80	1	80
5 ²⁾	M10 x 35	2	40
A	Dowel sleeves for centering	2	

1) Screw with threaded pin M8.

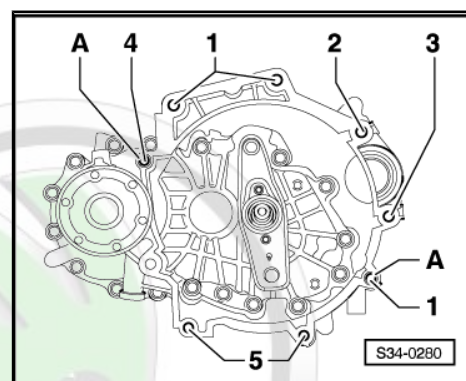
2) Screws for cover plate



Vehicles with 1.6/85 kW Engine

Position	Screw	Pieces	Nm
1	M12 x 60	3	80
2 ¹⁾	M12 x 135	1	80
3 ¹⁾	M12 x 150	1	80
4	M12 x 80	1	80
5	M10 x 50	2	40
A	Dowel sleeves for centering	2	

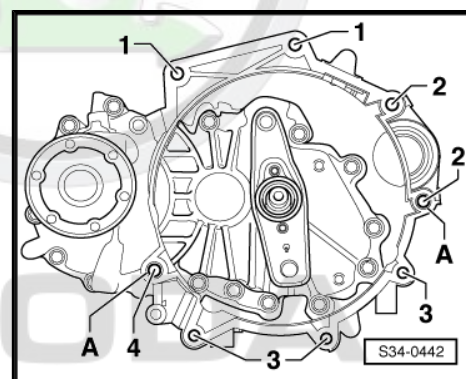
1) Screw with threaded pin M8.



Vehicles with 1.6/75 kW Engine

Position	Screw	Pieces	Nm
1	M12 x 60	2	80
2 ¹⁾	M12 x 135	2	80
3	M10 x 50	3	40
4	M12 x 90	1	80
A	Dowel sleeves for centering	2	

1) Screw with threaded pin M8.



Component	Tightening torque
Gearbox console to gearbox ¹⁾	40 Nm + 90°



Component	Tightening torque
Gearbox console to gearbox mount ¹⁾	60 Nm + 90°
Cover plate for flywheel	10 Nm
Cable support to gearbox	⇒ "1.5 Summary of components - control cables", page 80
Slave cylinder to gearbox	⇒ "1.4 Assembly overview - clutch release mechanism", page 23
Gearbox shift lever to gearshift shaft	⇒ "1.4 Summary of components - shift lever and shift housing", page 74
Pendulum support	⇒ Engine; Rep. gr. 10
Clamping sleeve for exhaust system	⇒ Engine; Rep. gr. 26
Bracket for electric cables	⇒ Electrical system; Rep. gr. 27
Protection plate of drive shaft to engine	⇒ Chassis; Rep. gr. 40
Drive shaft to flange shaft	⇒ Chassis; Rep. gr. 40
Wheel bolts	⇒ Chassis; Rep. gr. 44

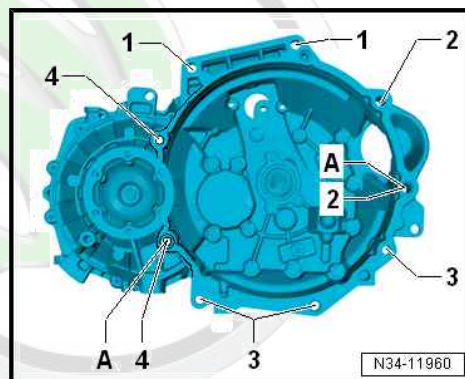
¹⁾ Always replace these screws after removal ⇒ Electronic Catalogue of Original Parts .

2.1.2 Tightening torques for gearbox, Octavia III

Vehicles with 1.2 I / 63; 77 kW TSI engines

Position	Screw	Pieces	Nm
1	M12 × 60	2	80
2	M12 × 150 ◆ additional starter to gearbox	2	80
3	M10 × 55	3	40
4	M12 × 70	2	80

Position -A-: dowel sleeves for centring motor / gearbox.



2.2 Removing the gearbox

⇒ "2.2.1 Removing gearbox, Octavia II", page 110

⇒ "2.2.2 Removing gearbox, Octavia III", page 116

2.2.1 Removing gearbox, Octavia II

Special tools and workshop equipment required

- ◆ Supporting device - T30099-
- ◆ Surface - T30099/1-
- ◆ Hook for MP9-200 and T30099 - MP9-200/10 (10-222A/10)-
- ◆ Gearbox mount - 3282-
- ◆ Adjusting plate - 3282/31-
- ◆ Gearbox attachment device - MP3-478 (3336)-
- ◆ Engine/gearbox jack , e.g. -V.A.G 1383 A-
- ◆ Pliers for spring-type clips
- ◆ Grease - G 000 100-

- Remove engine cover engine ⇒ Engine; Rep. gr. 10

 Note

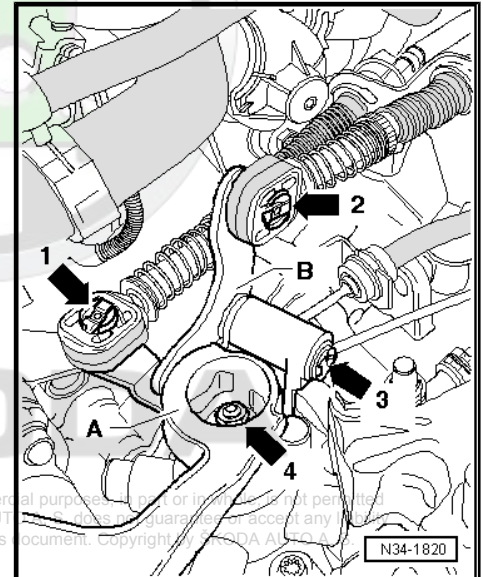
- ◆ *All cable straps that are detached or cut when removing should be attached again in the same place when installing.*
- ◆ *If the battery earth strap is disconnected and connected, carry out additional operations ⇒ Electrical System; Rep. gr. 27 .*
- Disconnect the battery-earth strap with the ignition off ⇒ Electrical System; Rep. gr. 27 .
- Remove the cooling water tank cover ⇒ Body Work; Rep. gr. 66 .
- Remove air filter ⇒ Engine; Rep. gr. 24 .
- Remove battery and battery tray ⇒ Electrical System; Rep. gr. 27 .
- Remove lock washer -arrow 1- for shift cable from gearbox shift lever -A-.
- Pull off the shift cable from the stud.

Metal relay lever

- Remove circlip -arrow 2- for selector cable from relay lever -B-.
- Pull off the selector cable from the stud.
- Detach circlip -arrow 3- from the relay lever -B- and remove relay lever.

 Note

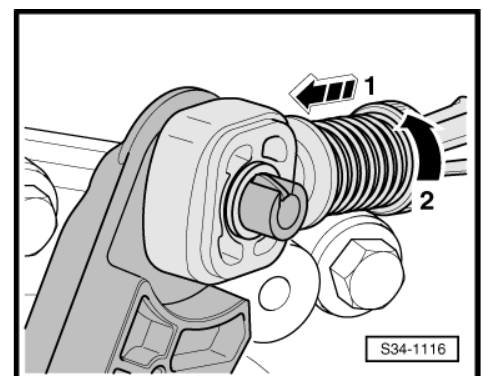
Always replace circlips.



Plastic relay lever

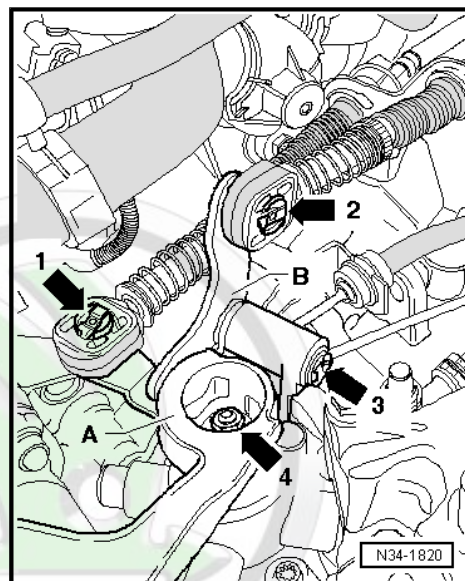
- In order to avoid damage to the selector cable, the cable lock must be separated from the selector cable before removal.
- Pull forward the locking mechanism as far as the stop in -direction of arrow 1-, then lock by turning to the left in -direction of arrow 2-.
- Remove relay lever together with cable lock ⇒ [“1.8 Repairing shift mechanism”, page 92](#) .

Continued for all vehicles

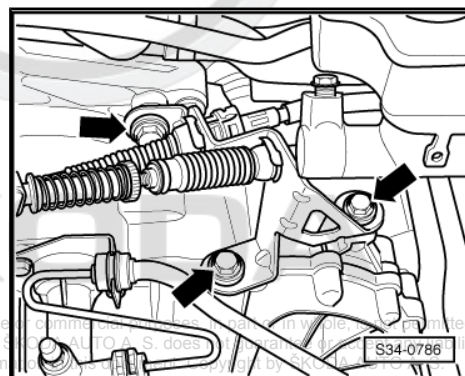




- Remove the gearshift lever -A-, for this step unscrew nut -arrow 4-.



- Remove Bowden cable support -arrows-.
- Tie up shift cable and selector cable.

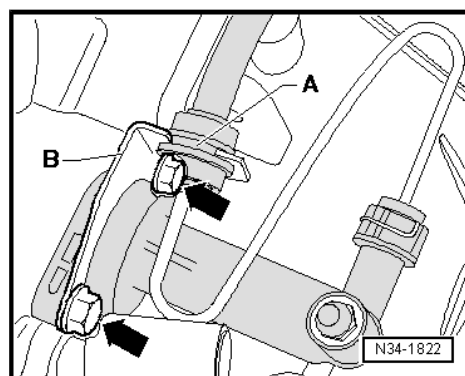


- Disconnect the tube-hose line -A- from bracket -B- on the gearbox.
- Remove slave cylinder -B-, lay aside and secure with wire. Do not open line system.

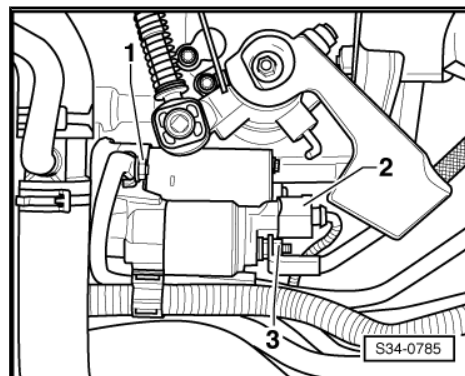


Note

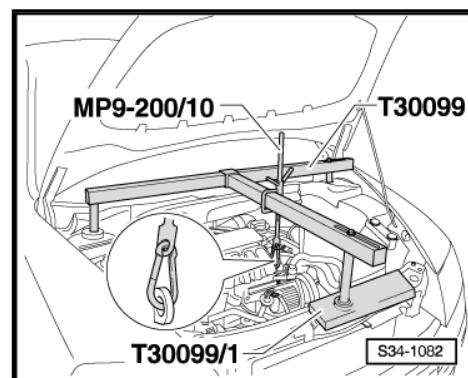
Do not depress the clutch pedal.



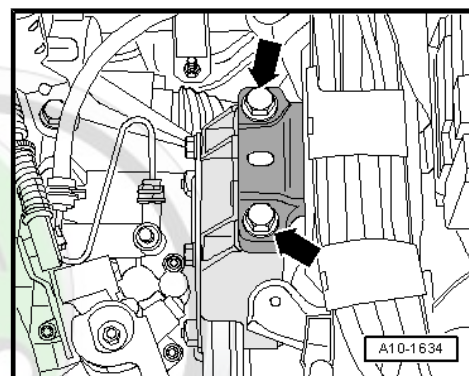
- Unplug connector -2- and cables -1- and -3- from the starter.
- Remove engine/gearbox connecting screws at the top.
- Unscrew fixing screw for starter at the top.



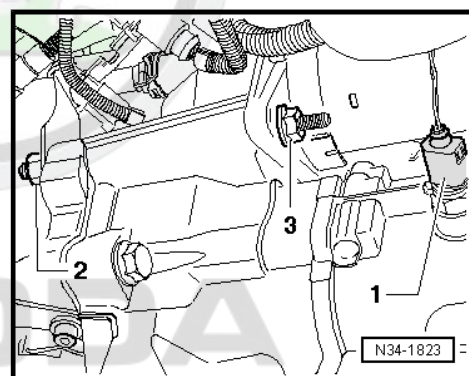
- Fit supporting device -T30099- .
- Take up the weight of the engine/gearbox unit at the spindles.



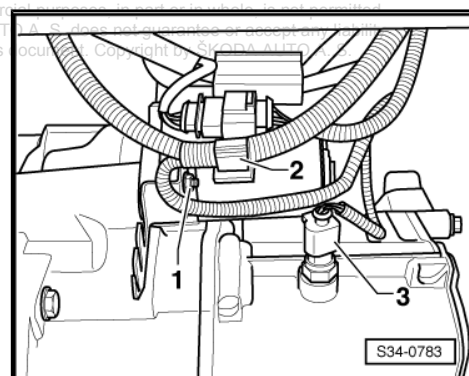
- Remove fixing screws for gearbox mount -arrows- from above.
- Raise vehicle ⇒ Maintenance ; Booklet Octavia II .
- Remove noise insulation ⇒ Body Work; Rep. gr. 50 and front left wheelhouse liner ⇒ Body Work; Rep. gr. 66 .



- Disconnect plug -1- of the reversing light.



- Unscrew nut -1- and lay aside line holder -2- together with the line.
- Remove starter ⇒ Electrical System; Rep. gr. 27 .





- If applicable remove cap for drive shaft from the engine -arrows-.
- Separate exhaust system at the clamping sleeve and remove bracket for the exhaust system from the assembly carrier ➔ Engine; Rep. gr. 26 .
- Remove drive shafts from flange shafts ➔ Chassis; Rep. gr. 40 and tie up as far as possible, do not damage the surface protection.
- Unscrew the engine/gearbox connecting screw -A- in the area of the right flange shaft.



Note

In combination with several engines, the engine/gearbox connecting screw is located below the right flange shaft.

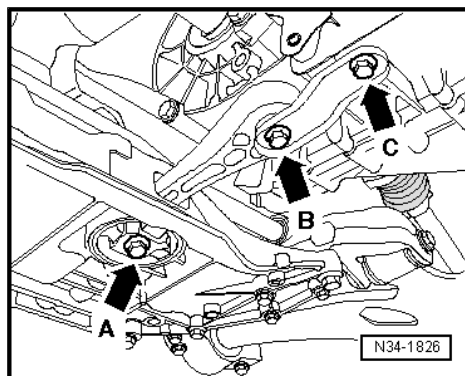
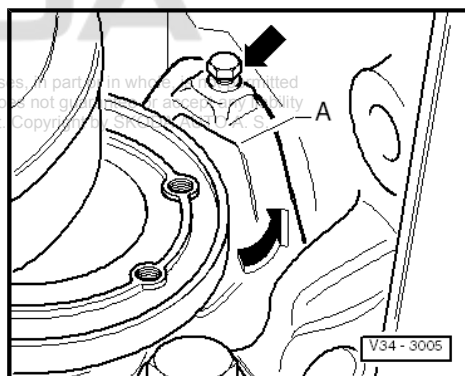
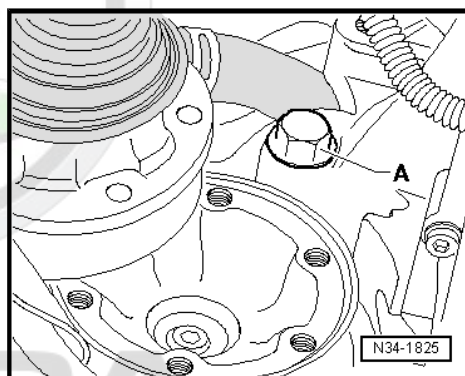
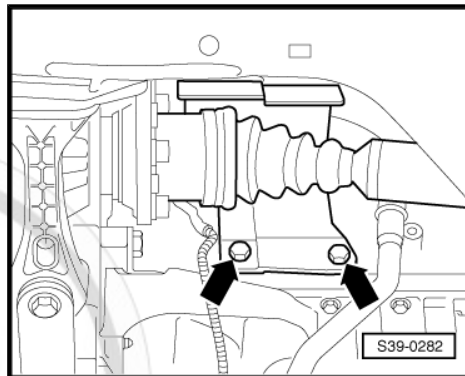
- Remove small cover plate -A- for flywheel (if present).

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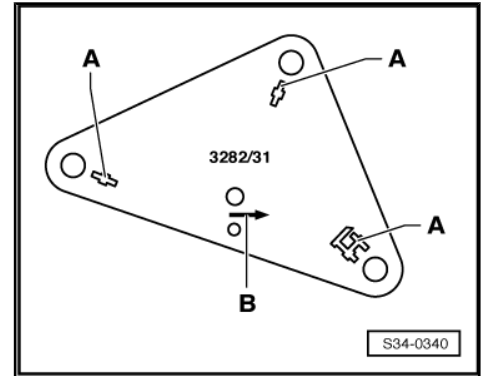
- Remove pendulum support -arrows A, B- and -C-.
- Insert gearbox mount - 3282- into engine/gearbox jack , e.g. - V.A.G 1383 A- .

Complete engine/gearbox jack with gearbox mount - 3282- , adjusting plate - 3282/31- for gearbox "0AF" and support elements:

- Position adjusting plate - 3282/31- on gearbox mount - 3282- (adjusting plate fits in only one position).
- Align arms of the gearbox mount to match the holes in the adjusting plate .



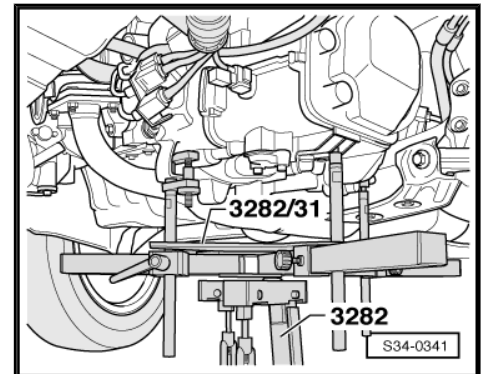
- Screw in the mounting elements -A- as shown on adjusting plate .



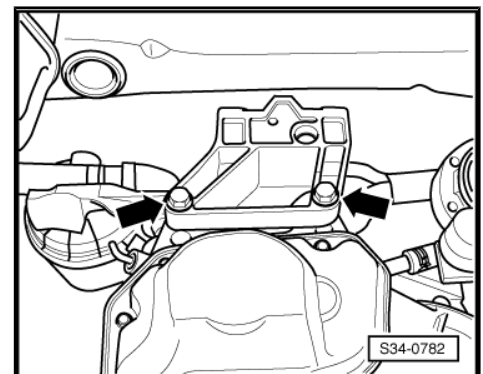
- Position engine/gearbox jack below vehicle, ⇒ Abb. S34-0340, arrow symbol -B- on adjusting plate points in the direction of travel.
- Align adjusting plate parallel to the gearbox and lock securing mounts at gearbox.
- Carefully lower engine with gearbox slightly.

i Note

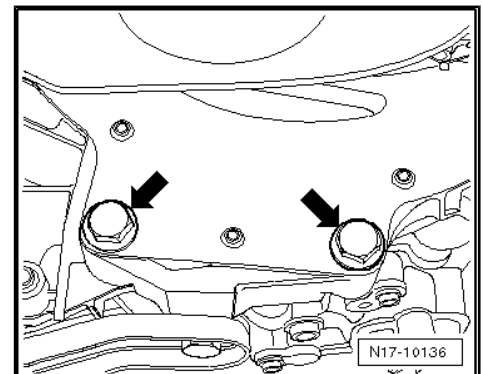
- ◆ *When lowering the engine/gearbox unit, make sure the gearbox does not touch the assembly carrier.*
- ◆ *Observe all lines when lowering the gearbox.*



- Remove gearbox console -arrows-.
- Remove the bottom engine/gearbox connecting screws.



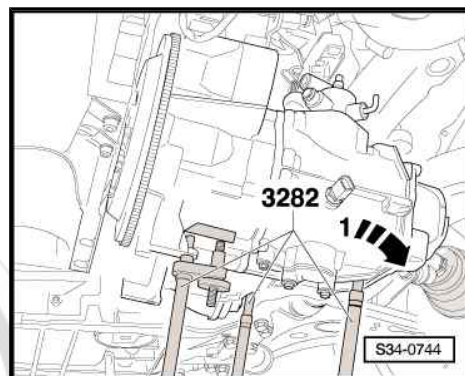
- For vehicles with metal oil pan, the cover plate -arrows- in the area of engine oil pan must be removed.
- Press the gearbox out of the sleeves.
- Pay attention to the intermediate plate on the engine.
- Ask a second mechanic to carefully push the engine forwards.



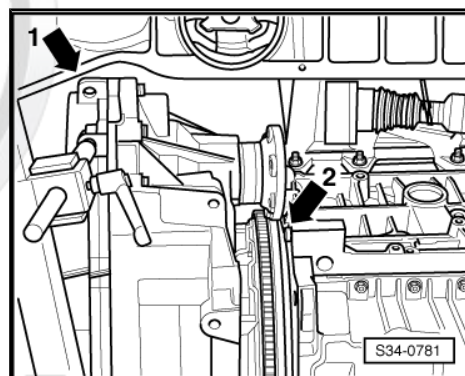
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- Turn gearbox in the area of the differential downwards and in the rear area slightly to the front -arrow 1-.



- After this, carefully guide gearbox with the right flange shaft -A- past the flywheel/intermediate plate -arrow 2- as shown.
- Lower gearbox, to do so pay attention to the assembly carrier -arrow 1-.
- Change the gearbox position at the spindles of the gearbox mount - 3282- when lowering.



2.2.2 Removing gearbox, Octavia III

Special tools and workshop equipment required

- ◆ Supporting device - T30099- Protected by copyright. Copying for private or commercial purposes, in part or in whole, is not permitted. SKODA AUTO A. S. SKODA AUTO A. S. does not guarantee or accept any liability with respect to the correctness of information in this document. Copyright by SKODA AUTO A. S.
- ◆ Adapter - T40091/3-
- ◆ Adapter - MP9-200/18-
- ◆ Support - 10-222A/31-
- ◆ Surface - T30119-
- ◆ Hook - MP9-200/10 (10-222A/10)-
- ◆ Gearbox mount - 3282-
- ◆ Adjusting plate - 3282/31-
- ◆ Engine/gearbox jack , e.g. -V.A.G 1383 A-
- ◆ Gearbox attachment device - MP3-478 (3336)-
- ◆ Grease - G 000 100-

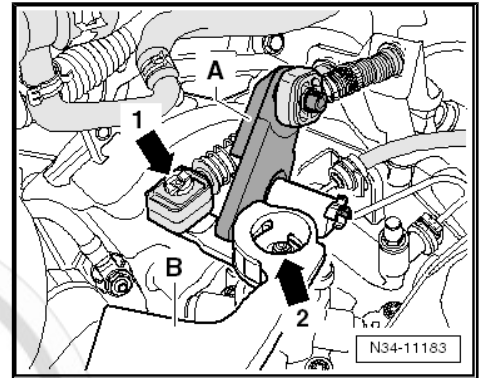
- Remove the battery with battery tray ⇒ Electrical system; Rep. gr. 27 ; Battery; Removing and installing battery tray .

- Remove air filter housing:

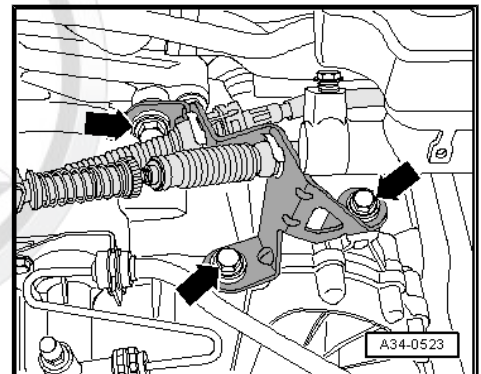
Petrol engines ⇒ Rep. gr. 24 ; Air filter; Removing and installing air filter housing

Diesel engines ⇒ Rep. gr. 23 ; Air filter; Removing and installing air filter housing

- Remove securing mechanism -1- for gear selector cable from the pin of gearbox selector lever -B-.
- Remove relay lever -A- together with cable end-piece for gate selector cable ⇒ [page 96](#) .
- Remove nut -arrow 2- and remove the gearbox selector lever -B-.



- Unscrew the bolts -arrows- and lay the cable support with control cables to the side.

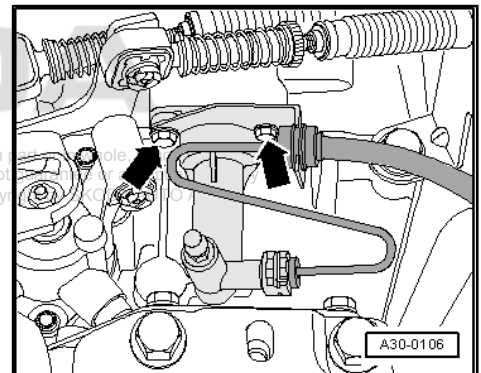


- Unscrew the bolts -arrows- and lay the slave cylinder to the side; do not open the hydraulic system.

**Caution**

Do not operate clutch pedal anymore!

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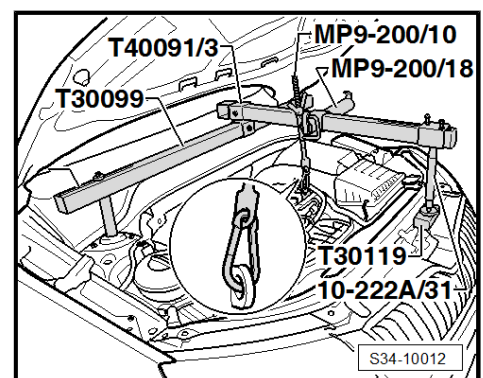


- Screw out bottom fixing screw for top starter and screw out the upper engine/gearbox connecting bolts.

**Note**

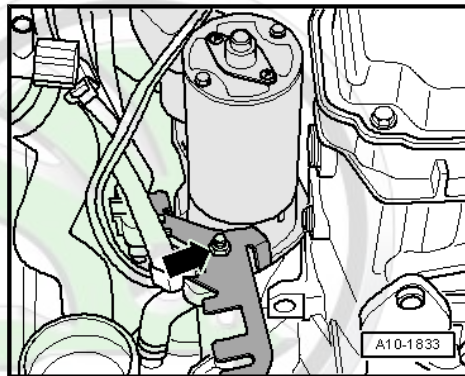
If hose and cable connections are located in the area of the lifting eye of the engine for the hook - MP9-200/10-, these must now be removed.

- Fit supporting device -T30099- .
- Slightly take up weight of engine/gearbox assembly on spindles of the hook - MP9-200/10- .
- Remove sound dampening system ⇒ General body repairs, exterior ; Rep. gr. 66 ; Noise insulation .
- Remove the front left wheelhouse liner ⇒ General body repairs, exterior; Rep. gr. 66 ; Wheelhouse liner; removing and installing front wheelhouse liner .

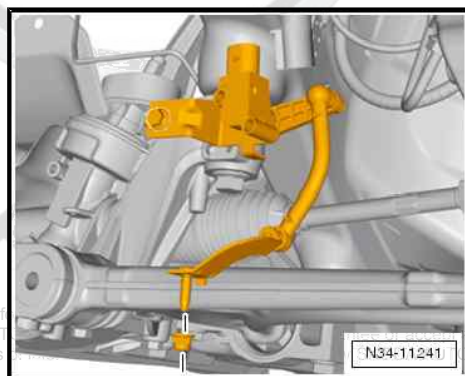




- Unscrew the nut -arrow- and remove the bracket for the electrical cables.
- Remove starter ⇒ Electrical system; Rep. gr. 27 ; Starter; Removing and installing starter .



- Unscrew the front left vehicle level sensor - G78- , where available, from the transverse arm.

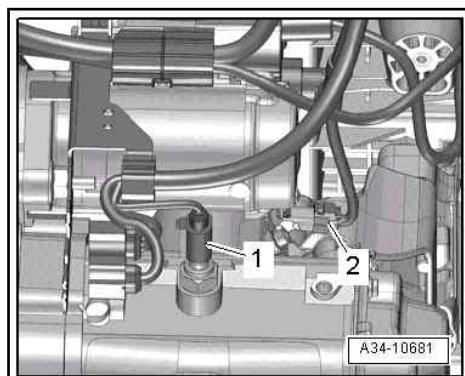


- Disconnect electrical plug connections:
 - 1 - Gearbox neutral position transmitter - G701-
 - 2 - Reversing light switch - F4-

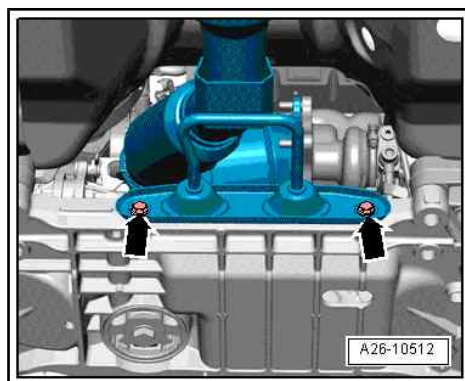


Caution

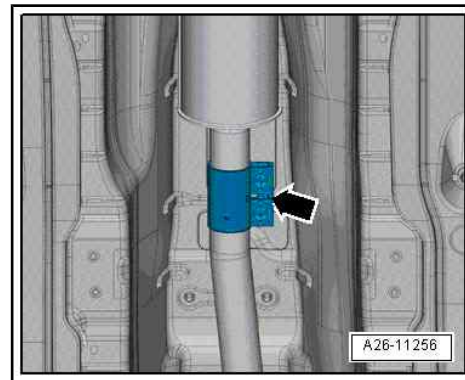
There is risk of damaging the decoupling element of the exhaust system.



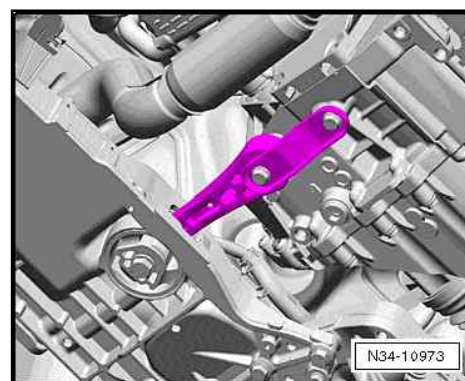
- Unscrew bolts -arrows- for holders for exhaust systems on the assembly carrier.



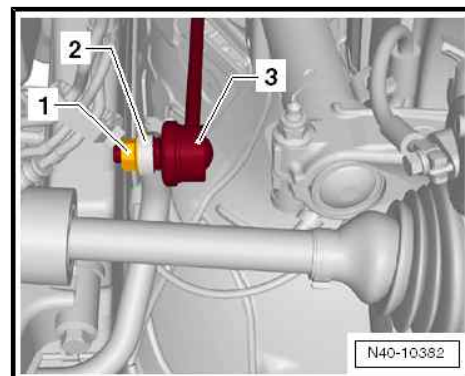
- Separate exhaust system at the clamping sleeve -arrow-.



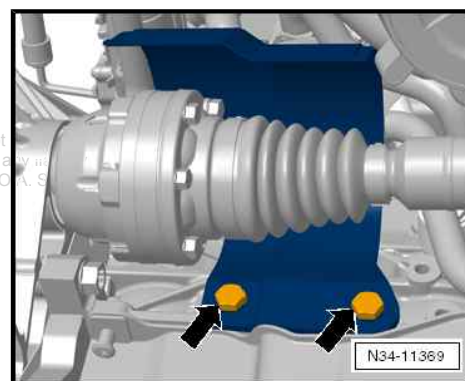
- Remove pendulum support.



- Unscrew nut -1- from both sides of anti-roll bar bracket -3-.
- Pull anti-roll bar bracket -3- on both sides out of the anti-roll bar -2-.

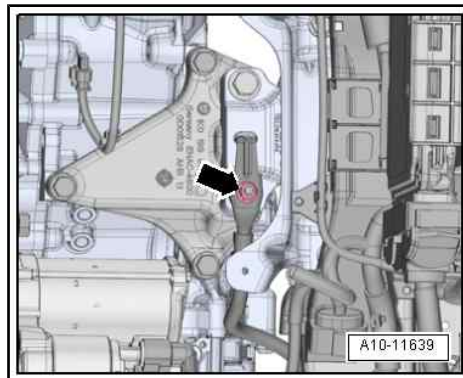


- If present, remove heat shield for drive shaft -arrows-.
- Remove the drive shafts from the flange shafts and tie them up as high as possible. Do not damage the surface protection, ⇒ chassis, axles, steering; Rep. gr. 40 ; Cardan shaft; remove and install cardan shaft .

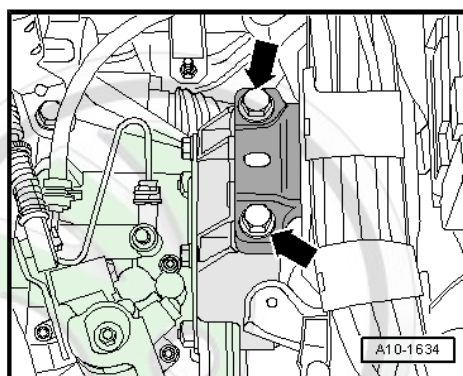




- Unscrew nut -arrow- and remove earth strap from gearbox mount.



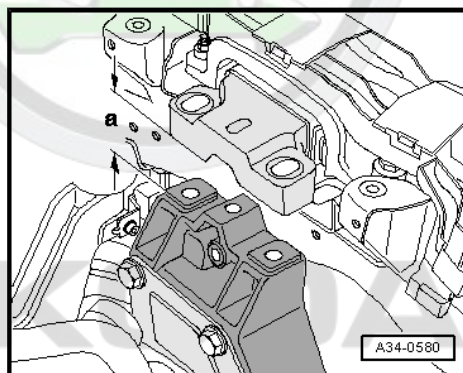
- Unscrew the screws -arrows- from the gearbox mount.



- Lower the gearbox by adjusting the spindles of the hook -MP9-200/10 (10-222A/10)- by the dimension -a-.

- Dimension -a- = 60 mm

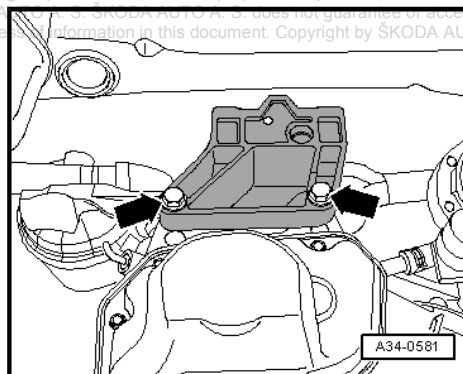
- Removing gearbox console:



Gearbox console is on the gearbox to the side.

- Release screws -arrows- and remove gearbox console from gearbox.

or

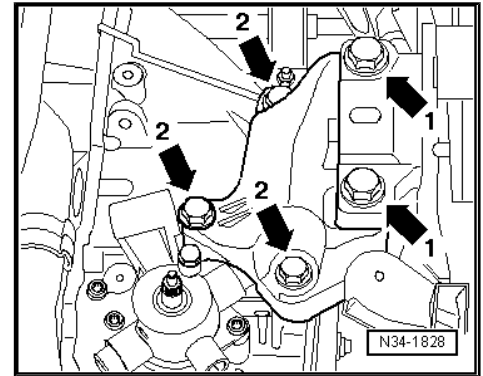


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Gearbox console is on the gearbox on top.

- Screws -arrows 1- for gearbox mount are released.
- Release screws -arrows 2- and remove gearbox console from gearbox.

Continued for all versions



Connecting screws -2, 3- for engine/gearbox and bolts -4, 5- on the starter are unscrewed.

- Unscrew the connecting screws -7, 8- for engine/gearbox.



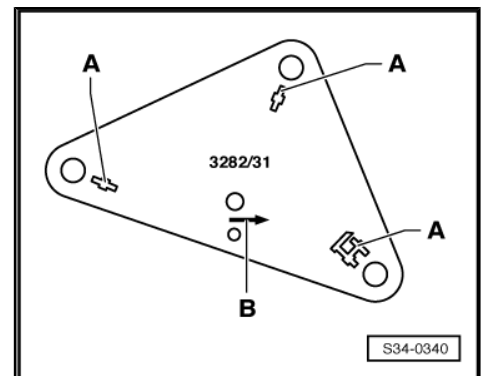
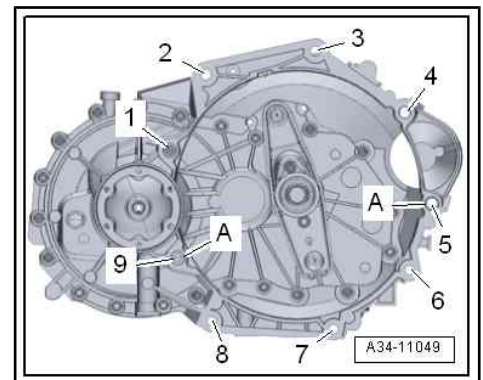
Note

Connecting screws -1, 6, 9- are unscrewed for engine/gearbox later.

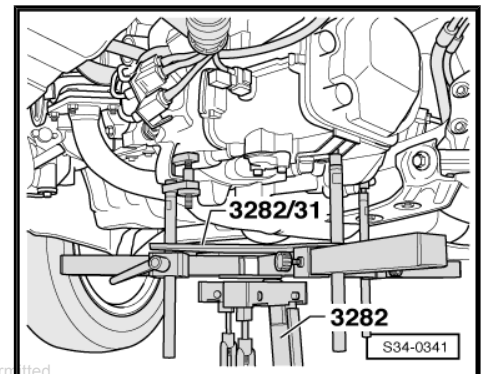
- Insert gearbox mount - 3282- into engine/gearbox jack , e.g. - V.A.G 1383 A- .

Complete engine/gearbox jack with gearbox mount - 3282- , adjusting plate - 3282/31- for gearbox "0AF" and support elements:

- Position adjusting plate - 3282/31- on gearbox mount - 3282- (adjusting plate fits in only one position).
- Align arms of the gearbox mount to match the holes in the adjusting plate .
- Screw in the mounting elements -A- as shown on adjusting plate .



- Position engine/gearbox jack below vehicle, ⇒ Abb. S34-0340, arrow symbol -B- on adjusting plate points in the direction of travel.
- Align adjusting plate parallel to the gearbox and lock securing mounts at gearbox.

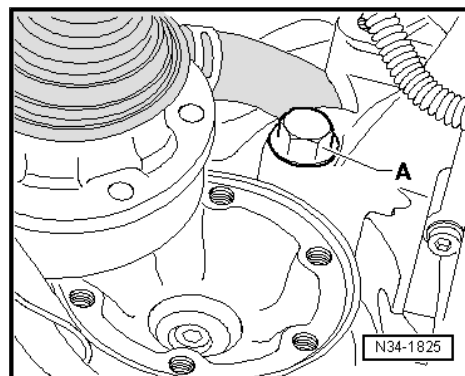


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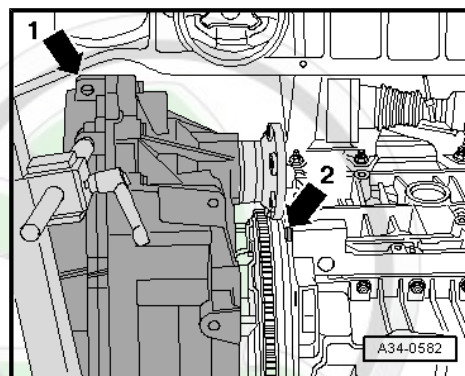
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- Remove screw -A- above and screw below the right flange shaft.
- Remove all other connecting screws to engine/gearbox.
- Press the gearbox out of the sleeves.
- Pay attention to the intermediate plate on the engine.
- Carefully push the engine forwards (use 2nd mechanic).



- Afterwards, carefully pass with the flange shaft right on the flywheel/at the intermediate plate -arrow 2-.
- Lower gearbox, to do so pay attention to the assembly carrier -arrow 1-.
- If necessary, adjust the position of the gearbox when lowering over the spindles of the gearbox support - 3282- .



Note

Observe all lines when lowering the gearbox.

2.3 Installing the gearbox

⇒ [“2.3.1 Installing gearbox, Octavia II”, page 122](#)

⇒ [“2.3.2 Installing gearbox, Octavia III”, page 123](#)

2.3.1 Installing gearbox, Octavia II

The installation of the gearbox occurs in reverse order. Observe the stress-free assembly bracket in the vehicle ⇒ Engine; Rep. gr. 10 .

- After installing, check gear oil level
⇒ [“6.1 Checking the gear oil level”, page 151](#) .

Capacity and specification

⇒ [“4.1 Allocation gearbox - engine”, page 8](#) .

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Note

- ◆ Clean the splines on the drive shaft and lubricate with a thin film of grease - G 000 100- .
- ◆ Replace self-locking screws and nuts after removal.
- ◆ If the gearbox is replaced, ensure the intermediate plate between the engine and gearbox is correctly installed.
- ◆ Check whether the dowel sleeves for centering the gearbox are present in the cylinder block, insert if necessary.
- ◆ Assemble exhaust system free of stress ⇒ Engine; Rep. gr. 26 .
- ◆ Installing starter and cables ⇒ Electrical System; Rep. gr. 27 .
- ◆ Install sound dampening ⇒ Body Work; Rep. gr. 50 and install front left wheelhouse liner ⇒ Body Work; Rep. gr. 66 .
- ◆ Setting the shift mechanism
⇒ ["1.9 Setting the shift mechanism", page 97](#) .
- ◆ After the battery earth strap is disconnected and connected, carry out additional operations ⇒ Electrical System; Rep. gr. 27 .

2.3.2 Installing gearbox, Octavia III

Note

Refer to procedure "Removing gearbox" for required special tools
⇒ ["2.2 Removing the gearbox", page 110](#) .

- Clean all threaded holes into which bolts are screwed in with locking agent, using a suitable thread tap to remove old locking agent residues.
- After the installation, replace screws to be screwed in with locking agent and self-locking nuts.
- Check whether the dowel sleeves for centring the engine/gearbox are present in the cylinder block; insert if necessary.

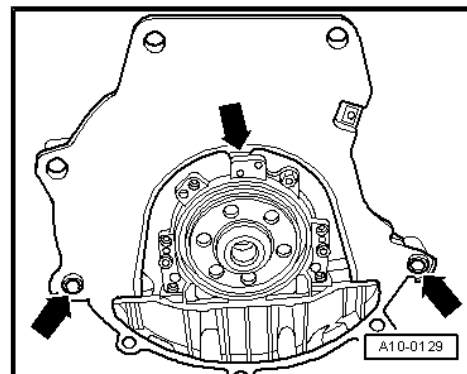
If the dowel sleeves are not installed, there are problems with the gearshift and the clutch or the gearbox is loud (sound of loose wheels).

- Check whether the intermediate plate is suspended from the sealing flange -arrow top- and slid onto the dowel sleeves -arrows below-.
- Clean the splines on the drive shaft and lubricate with a thin film of grease - G 000 100- .

The clutch plate must slide easily to and fro on the input shaft.

The gearbox mount - 3282- must be adjusted before installing the gearbox "0AF" with the aid of the adjusting plate - 3282/31- .

- Position gearbox mount - 3282- onto the engine/gearbox jack - V.A.G 1383 A- .
- Position adjusting plate - 3282/31- onto the gearbox mount - 3282- (adjusting plate fits in only one position).
- Align arms of the gearbox mount to match the holes in the adjusting plate .





- Screw in support elements -A- as illustrated on adjusting plate .
- Align the adjusting plate parallel to the gearbox.
- Afterwards carefully raise the gearbox and pass it by the assembly carrier.



Note

Be careful of all lines when installing gearbox.

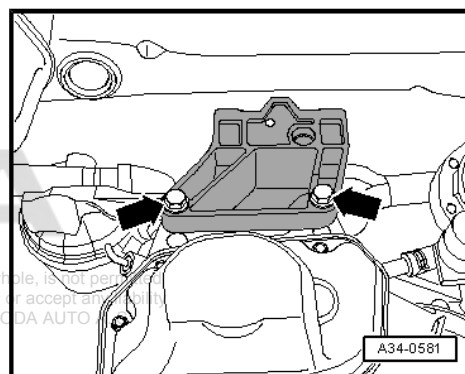
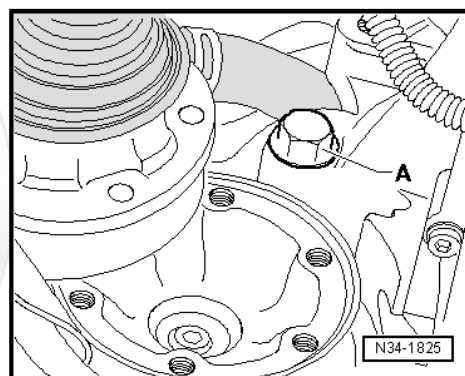
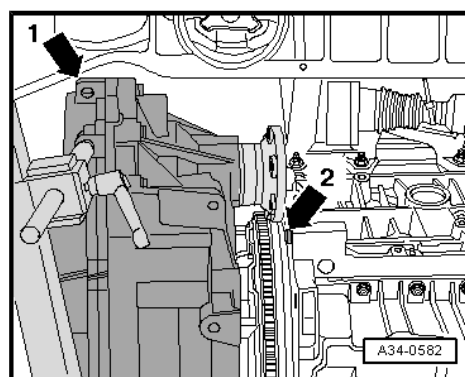
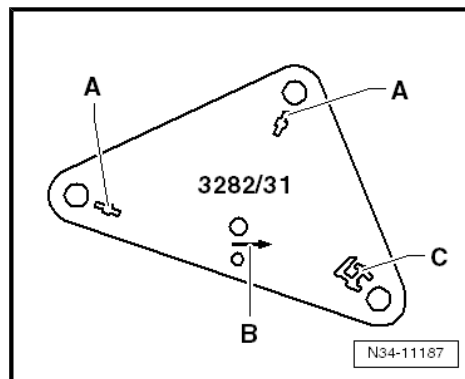
- Carefully push the engine forwards (2nd mechanic).
- To do so, carefully pass the gearbox, as shown, past the fly-wheel -arrow 2- and past the assembly carrier -arrow 1-.
- Place the gearbox on the engine, while do so screw in the connecting screws for engine/gearbox in the area of the engine oil trough
⇒ [“2.1 Tightening torques for gearbox”, page 109](#) .

- Insert screw -A- above and below the right flange shaft and tighten ⇒ [“2.1 Tightening torques for gearbox”, page 109](#) .
- After connecting the engine/gearbox, remove the engine/gearbox jack from the gearbox.
- Install the gearbox console:

Gearbox console is attached to the side of the gearbox -arrows-

- Install the gearbox console with the new bolts -arrows 2- and tighten to 40 Nm and turn 90° further.

or



Gearbox support bracket s secured to the gearbox from above -arrow 2-

- Install the gearbox console with the new bolts -arrows 2- and tighten to 40 Nm and turn 90° further.

Continued for all versions

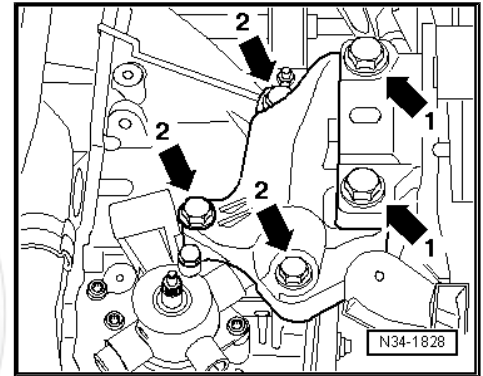
- By tightening the spindles of the hook - MP9-200/10- align the motor/gearbox aggregate in the fitting position until the gearbox console rests against the gearbox mount.



Caution

There is a risk of damaging the thread in the gearbox console by tightening the bolts obliquely.

- ♦ *To avoid damages to the threads in the gearbox console, gearbox bearings and gearbox console must run parallel to one another.*



- Insert new bolts -arrows 1- and tighten to 60 Nm and turn 90° further.

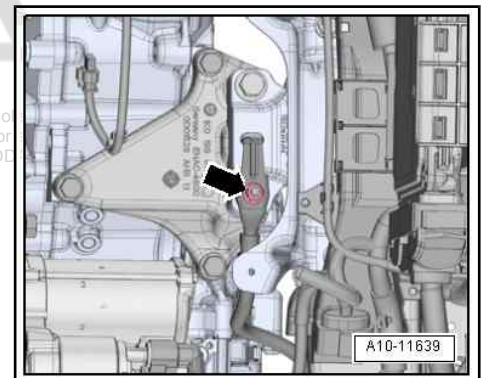
- Install earth cable -arrow-.



Caution

Risk of an accident!

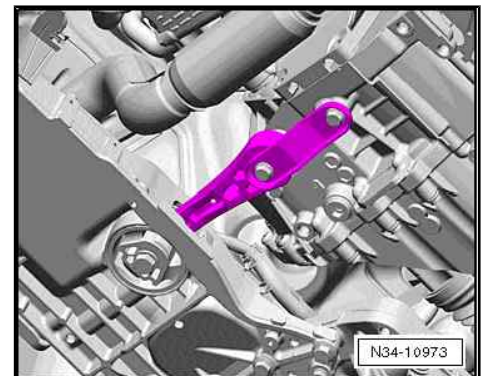
- *Do not remove support bracket - T30099- until all bolts securing the assembly mounting have been tightened to specified torque.*



- Install new screws and install pendulum support ⇒ Rep. gr. 10 ; Aggregate storage; Removing and installing pendulum support .

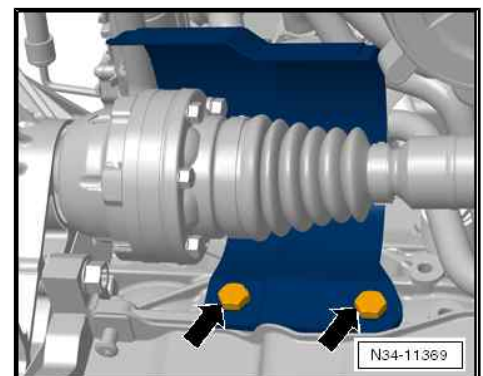
- Check settings for unit mounting ⇒ Rep. gr. 10 ; Aggregate storage; Set the assembly storage .

- Assemble exhaust system tension-free ⇒ Rep. gr. 26 ; Exhaust pipes/silencers; Align exhaust system free of stress .



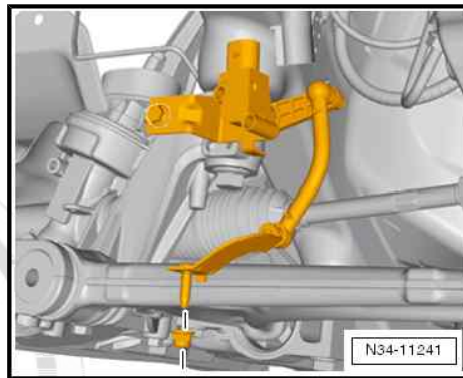
- Install drive shafts ⇒ Chassis, axles, steering; Rep. gr. 40 ; Drive shaft; removing and installing drive shaft .

- Install heat shield for drive shaft if present -arrows- ⇒ Chassis, axles, steering; Rep. gr. 40 ; Cardan shaft; installing and removing heat shield for cardan shaft .

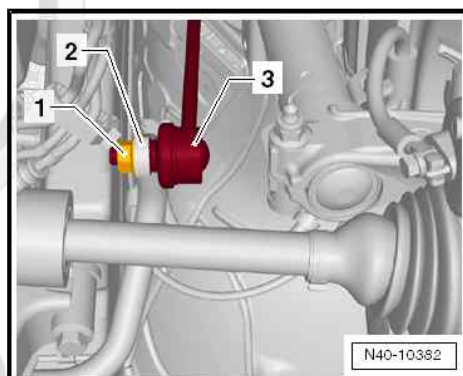




- Encoder for front vehicle level - G78- , if available, to be installed on the steering joint ⇒ Suspension, axles, steering; Rep. gr. 43 ; Sensor for vehicle level; sensor for front vehicle level -G78- / -G289- installation and removal .

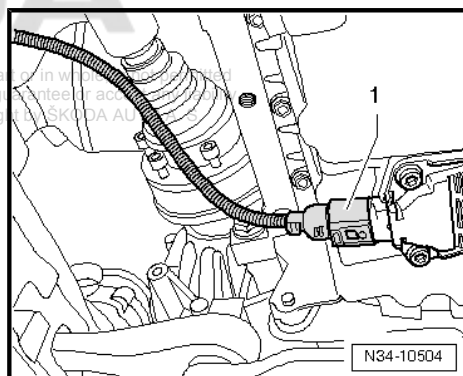


- Mount the stabilizer hanger on both sides -3- on the stabilizer -2- ⇒ Suspension, axles, steering; Rep. gr. 40 ; Unit carrier; Removing and installing coupling rod ,

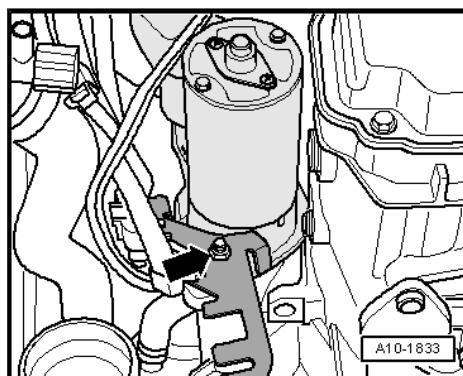


- Mount plug -1- at the oil level and oil temperature sender - G266- .

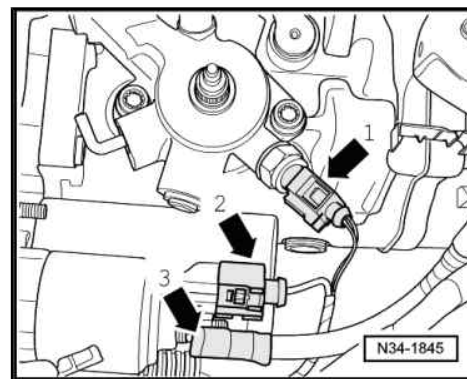
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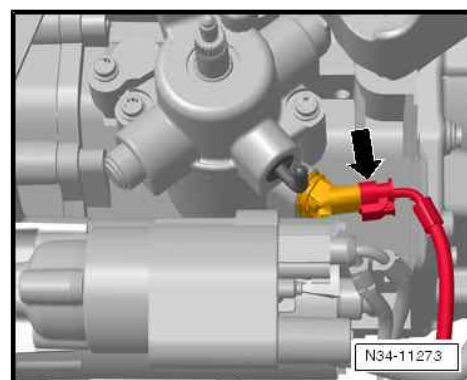
- Install starter and bracket for electrical wiring -arrow- ⇒ Electrical system; Rep. gr. 27 ; Starter; Removing and installing starter .
- Screw in the upper engine/gearbox connecting bolts and tighten ⇒ [“2.1 Tightening torques for gearbox”, page 109](#) .
- Install clutch slave cylinder
⇒ [“1.11 Removing and installing the slave cylinder”, page 44](#) .



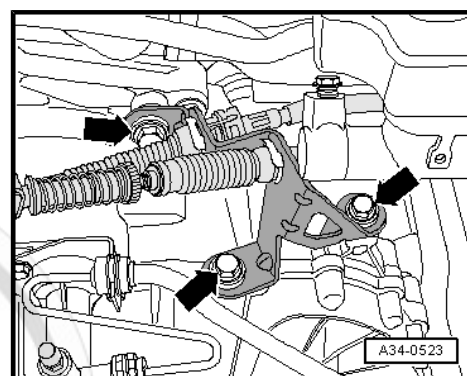
- Connect plug -arrow 1- from the switch for rear lights - F4- .



- Transmission for vehicles with start-stop system: pull plug -arrow- AM Gearbox neutral position sender - G701- .



- Install cable support bracket to gearbox -arrow-.



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- Install gearshift lever -B-
⇒ [“1.8 Repairing shift mechanism”, page 92](#) .
- Install relay lever -A- together with cable end-piece for gate selector cable ⇒ [page 96](#) .
- Spread a small amount of grease on pin of gearbox selector lever -B-.

Assignment grease for gearshift mechanism ⇒ Electronic Catalogue of Original Parts .

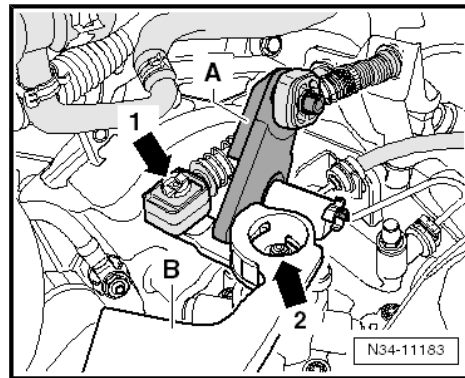
- Connect gear selection cable with gearbox selector lever.



Note

Replace safety mechanism -arrow 1- after removal.

- Setting the shift mechanism
⇒ [“1.9 Setting the shift mechanism”, page 97](#) .
- Install battery, battery cover and battery tray ⇒ Electrical system; Rep. gr. 27 ; Battery; Removing and installing battery carrier .
- Install air filter.
Petrol engines ⇒ Rep. gr. 24 ; Air filter; Removing and installing air filter housing
Diesel engines ⇒ Rep. gr. 23 ; Air filter; Removing and installing air filter housing
- Check gear oil level
⇒ [“6.1 Checking the gear oil level”, page 151](#) .
- Install the left front wheel housing liner ⇒ General body repairs, exterior; Rep. gr. 66 ; Wheel housing liner; Remove and install front wheel housing liner .
- Install the noise insulation ⇒ General body repairs, exterior; Rep. gr. 66 ; Noise insulation .

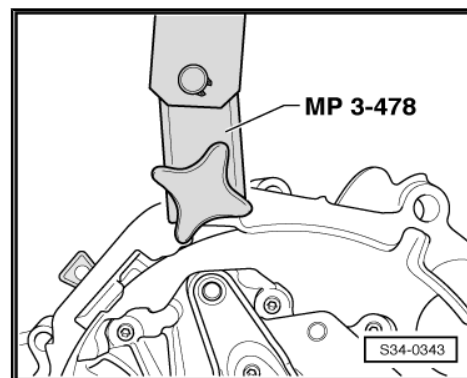


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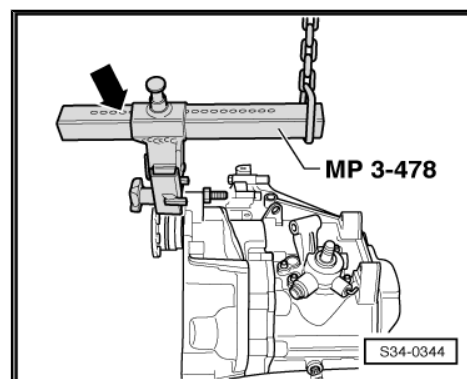
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3 Transporting the gearbox

- Screw gearbox suspension device - MP3-478 (3336)- to clutch housing.



- Adjust supporting arm at slide with locking pin -arrow-.
- No. of holes visible = 5
- Raise gearbox with workshop crane and gearbox suspension device - MP3-478 (3336)- .
 - Set gearbox aside, for example in a transport container.



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4 Disassembling and assembling the gearbox

⇒ [“4.1 Schematic overview - Gearbox”, page 130](#)

⇒ [“4.2 Summary of components - Gearbox”, page 131](#)

⇒ [“4.3 Summary of components - Gearshift unit”, page 132](#)

⇒ [“4.4 Summary of components - input shaft, output shafts, differential gear and shift rods”, page 133](#)

⇒ [“4.5 Assembly overview - shift forks”, page 135](#)

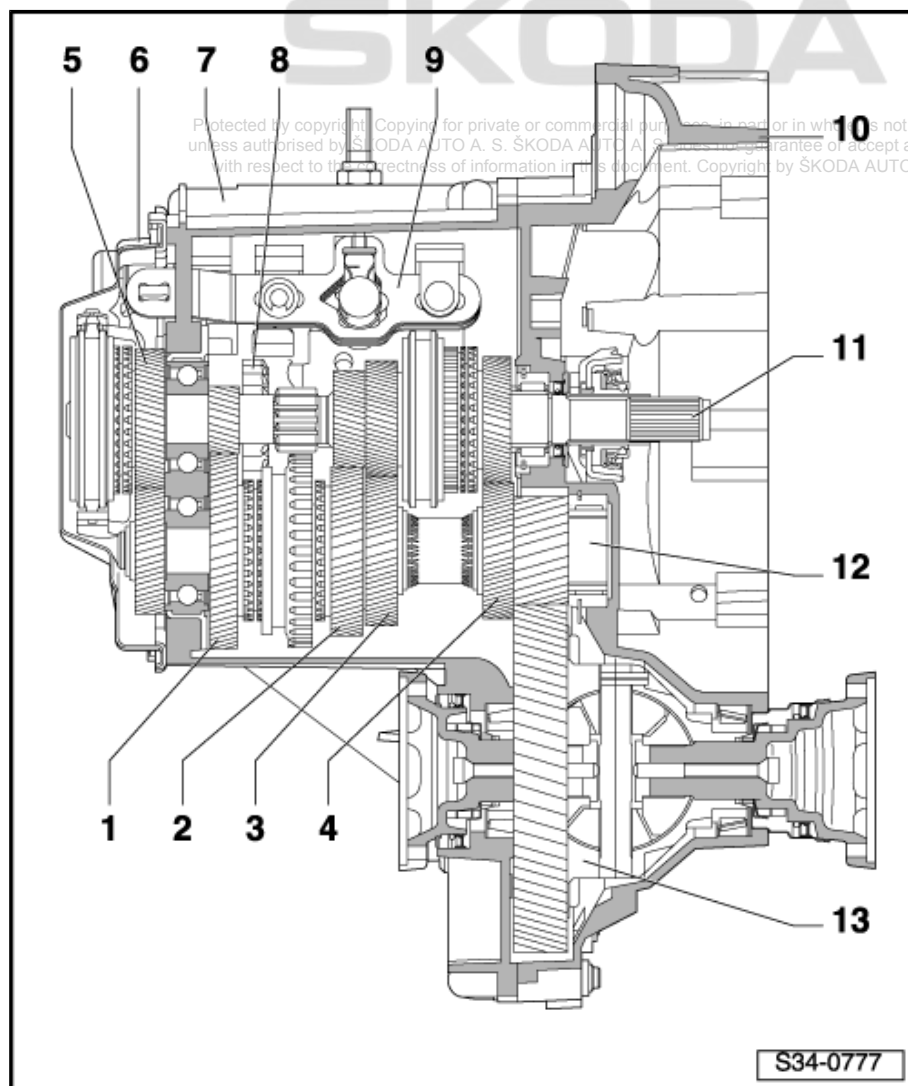
⇒ [“4.6 Disassembling and assembling the gearbox”, page 135](#)

⇒ [“4.7 Repairing gearshift unit”, page 142](#)

⇒ [“4.8 Disassembling and assembling the gearshift forks”, page 143](#)

4.1 Schematic overview - Gearbox

- 1 - 1st gear
- 2 - 2nd gear
- 3 - 3rd gear
- 4 - 4th gear
- 5 - 5th gear
- 6 - Cover for gearbox housing
- 7 - Gearbox housing
- 8 - Reverse gear
- 9 - Shift mechanism
 - (Gearshift forks)
- 10 - Clutch housing
- 11 - Drive shaft
- 12 - Output shaft
- 13 - Differential



4.2 Summary of components - Gearbox

I -

⇒ [“5.3 Summary of components- Gearbox housing cover”, page 148](#)

II -

⇒ [“5.1 Summary of components - Clutch housing”, page 145](#)

III -

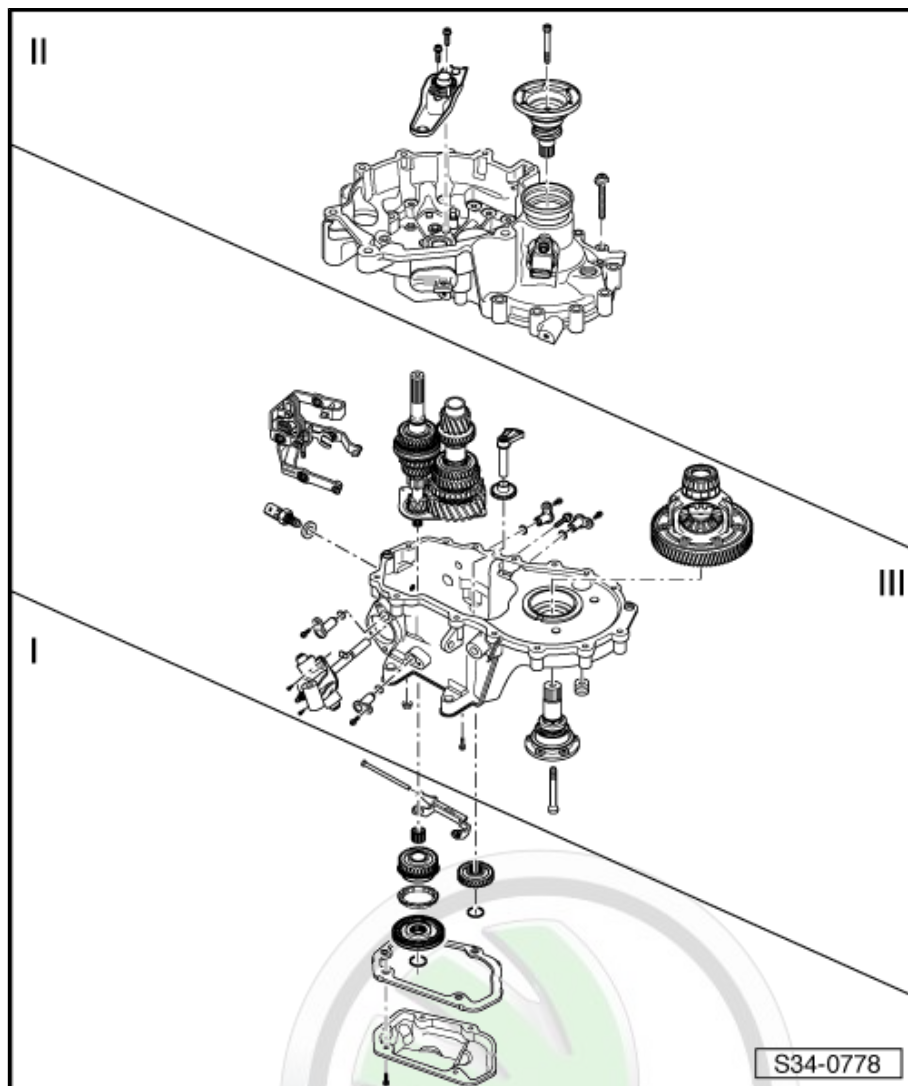
◆ ⇒ [“4.4 Summary of components - input shaft, output shafts, differential gear and shift rods”, page 133](#)

◆ ⇒ [“5.2 Summary of components - Gearbox housing and clutch housing”, page 146](#)

◆ ⇒ [“4.5 Assembly overview - shift forks”, page 135](#)

◆ ⇒ [“4.3 Summary of components - Gearshift unit”, page 132](#)

◆ ⇒ [“2 Differential”, page 173](#)



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4.3 Summary of components - Gearshift unit

1 - Bushing

- ☐ for gearshift shaft
- ☐ pressing in and pressing out
⇒ [“4.7 Repairing gear-shift unit”, page 142](#)

2 - Gearshift shaft with cover

- ☐ replace jointly

3 - Locking pin

- ☐ for adjusting the shift mechanism
- ☐ removing ⇒ [page 142](#)
- ☐ drive in ⇒ [page 143](#)

4 - Relay lever

- ☐ ⇒ [“1.8 Repairing shift mechanism”, page 92](#)

5 - Bushing

- ☐ is not required, if the relay lever is made of plastic

6 - Sealing ring

- ☐ release with a screwdriver
- ☐ Replace
⇒ [“1.12 Replacing the sealing ring for the gear-shift shaft”, page 107](#)

7 - Cap

- ☐ for gearbox bleeder

8 - Gearshift lever

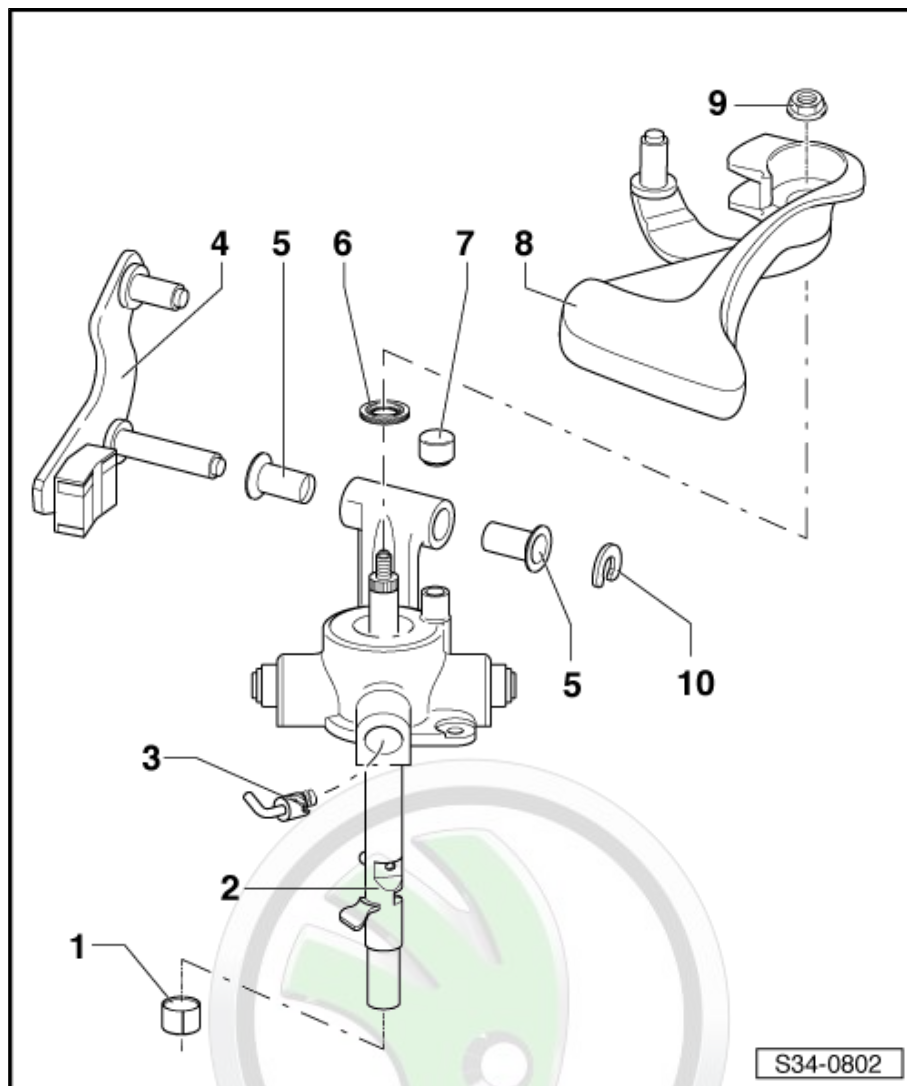
- ☐ ⇒ [“1.8 Repairing shift mechanism”, page 92](#)

9 - 23 Nm

- ☐ after removing, replace ⇒ Electronic Catalogue of Original Parts

10 - Circlip

- ☐ Replace after disassembly
- ☐ is not required, if the relay lever is made of plastic



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4.4 Summary of components - input shaft, output shafts, differential gear and shift rods

1 - Differential

- ☐ Disassembling and assembling
⇒ ["2 Differential", page 173](#)

2 - Gearbox housing

- ☐ repairing
⇒ ["5.4 Repairing gearbox housing", page 149](#)

3 - Oil drain plug

- ☐ different versions:
Oil drain plug with internal serration - 24 Nm
Oil drain plug with hexagon socket head - 32 Nm

4 - Flange shaft with pressure spring

- ☐ Overview
⇒ ["2.1 Summary of components - Differential", page 173](#)

5 - Conical screw, 25 Nm

6 - 5 Nm + torque a further 90° (1/4 turn)

- ☐ self-locking
- ☐ Replace after disassembly
- ☐ to secure the bearing support with grooved ball bearings for the drive and output shaft
Pos. 16

7 - 23 Nm

- ☐ for gearshift mechanism Pos. 15
- ☐ self-locking
- ☐ Replace after disassembly

8 - O-ring

- ☐ Replace after disassembly

9 - Bearing bolt

10 - 5 Nm + torque a further 90° (1/4 turn)

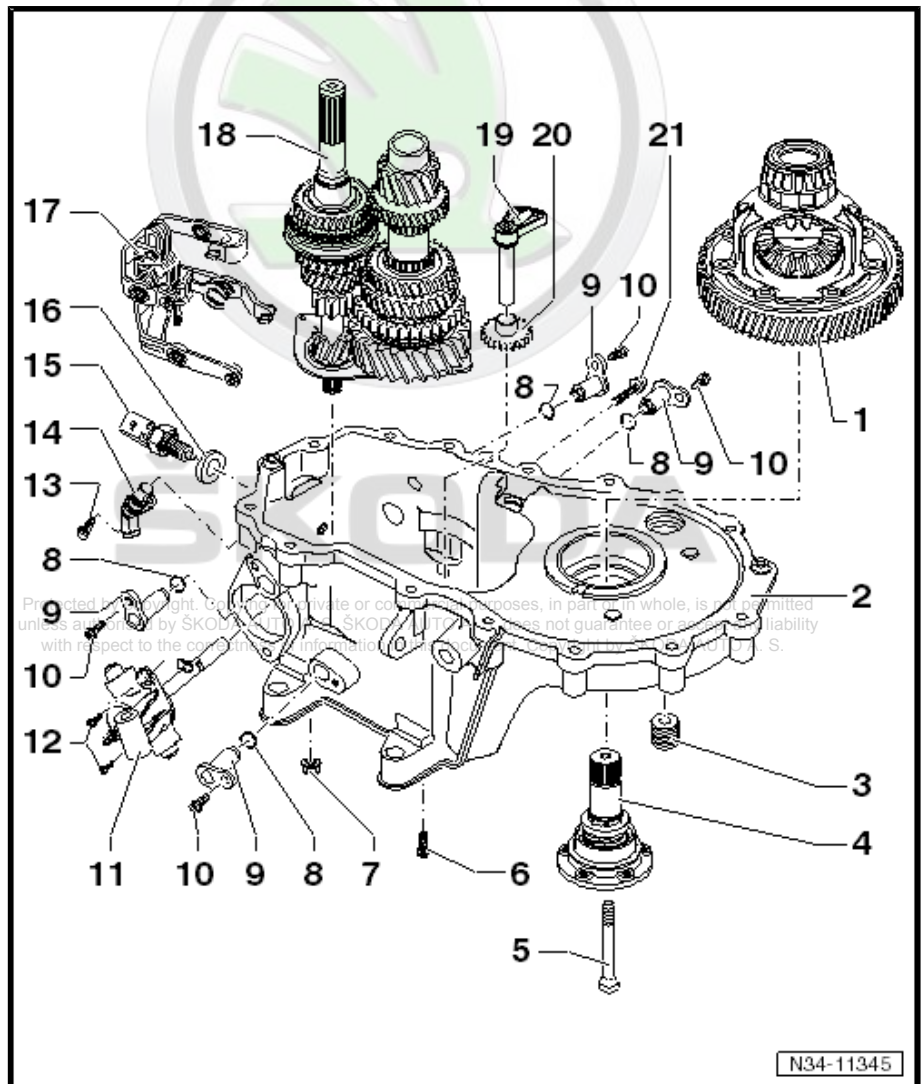
- ☐ Replace after disassembly

11 - Gearshift shaft with cover

- ☐ (Gearshift unit)
- ☐ repairing ⇒ ["4.7 Repairing gearshift unit", page 142](#)

12 - 5 Nm + torque a further 90° (1/4 turn)

- ☐ Replace after disassembly





13 - 6 Nm

14 - Gearbox neutral position transmitter - G701-

- ☐ only on vehicles with start-stop system

15 - Reversing light switch - F4- , 20 Nm

16 - Sealing ring

- ☐ Replace, if present

17 - Shift mechanism

- ☐ (Gearshift forks)
- ☐ repairing ⇒ [“4.8 Disassembling and assembling the gearshift forks”, page 143](#)

18 - Drive shaft and output shaft with bearing support for grooved ball bearings

- ☐ If the bearing support is released from the gearbox housing, it must always be replaced
- ☐ Overview ⇒ [g r.35 “Gears, shafts”, page 152](#)

19 - Shaft for reverse gear

20 - Reverse gear

21 - 25 Nm + torque a further 45° (1/8 turn)

- ☐ Replace after disassembly
- ☐ for securing the shaft for reverse gear.



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4.5 Assembly overview - shift forks



The gearshift fork group (Pos. 1) does not have to be disassembled for the disassembly and assembly of the shift segments, clamping plates and angular ball bearings.

1 - Gearshift fork group with shift rails

2 - 3rd/4th gear shift segment

- ☐ Identification
⇒ [page 143](#)
- ☐ It must still be possible to rotate the shift segment freely once fitted

3 - Ball bearing

- ☐ 4 units
- ☐ pressing off
⇒ [page 144](#)
- ☐ pressing on
⇒ [page 144](#)

4 - Clamp

- ☐ Replace after disassembly
- ☐ removing ⇒ [page 144](#)
- ☐ installing ⇒ [page 144](#)

5 - 1st/2nd gear shift segment

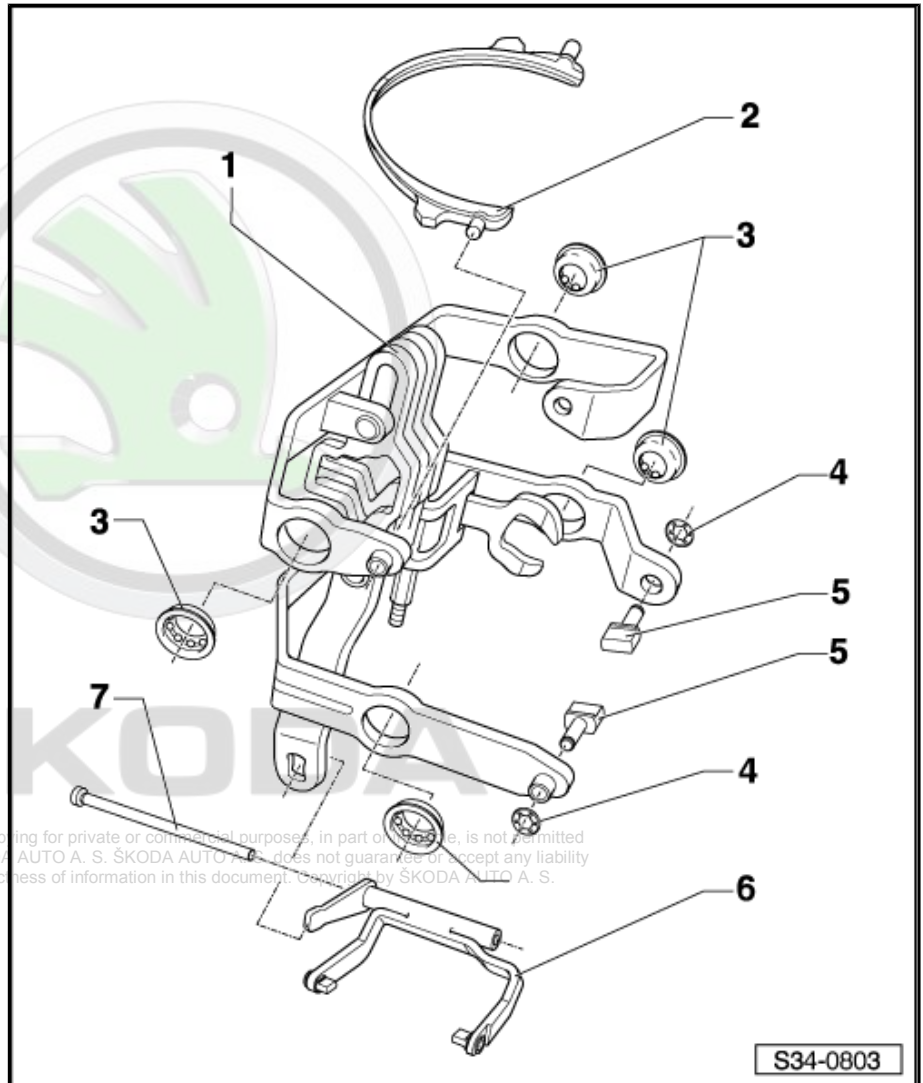
- ☐ Identification
⇒ [page 143](#)
- ☐ It must still be possible to rotate the shift segment freely once the circlip has been fitted
- ☐ Gearshift fork with shift segment

6 - 5th gear shift fork with shift segments

- ☐ Shift segments are connected inseparably with the gearshift fork
- ☐ Identification ⇒ [page 143](#)

7 - Bearing bolt

- ☐ for 5th gear shift fork



4.6 Disassembling and assembling the gearbox

Special tools and workshop equipment required

- ◆ Assembly stand - MP9-101-
- ◆ Pressure plate - MP3-406 (VW 401)-
- ◆ Pressure plate - MP3-407 (VW 402)-



- ◆ Pressure spindle - MP3-408 (VW 412)-
- ◆ Guide bolt - T10079-
- ◆ Gearbox mount - T30012 (3221)-
- ◆ Insert base - T10083-
- ◆ Surface - T10083/1-
- ◆ Thrust piece - T10085-
- ◆ Sealant - AMV 188 200-

Removing and installing cover for gearbox housing, clutch housing, gearshift shaft with gearshift cover, drive shaft, output shaft, differential and gearshift mechanism

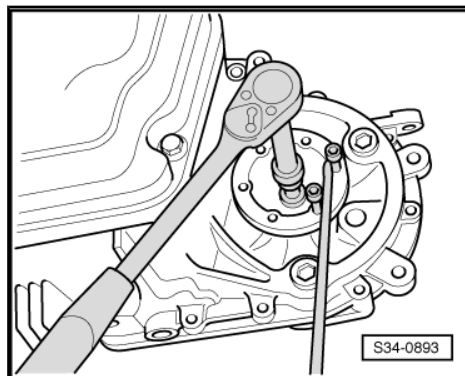
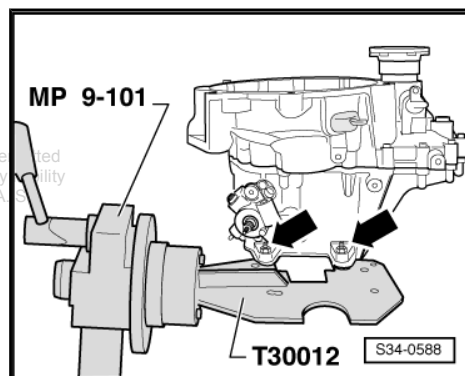


Note

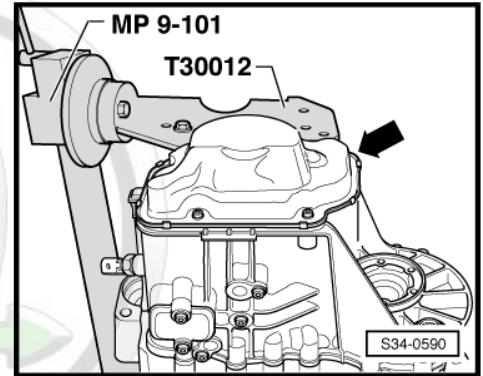
On gearboxes as of production date 06.2009, the springs of the sliding sleeve with synchronizer body for 3rd, 4th and 5th gear are changed (the springs are longer), at the same time the synchronizer ring for 3rd and 4th gear is changed as of this date → Electronic Catalogue of Original Parts .

Dismantling

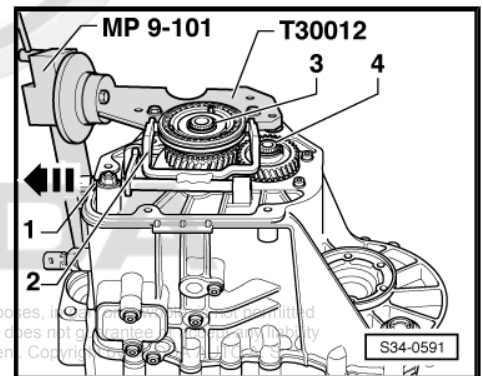
- Secure gearbox to the gearbox mount - T30012- -arrows-.
- Place catch pan underneath.
- Drain out gear oil.
- Remove the clutch release lever together with the release bearing and guide bushing
⇒ [“1.16 Repairing the clutch release mechanism”, page 55](#) .
- Remove both flange shafts.
- To this end insert two screws in the flange and counterhold the flange shaft using a tyre iron.
- Pull out the flange shaft with pressure spring, stop disc and conical ring.



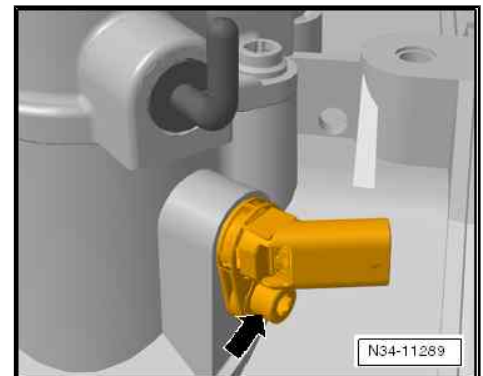
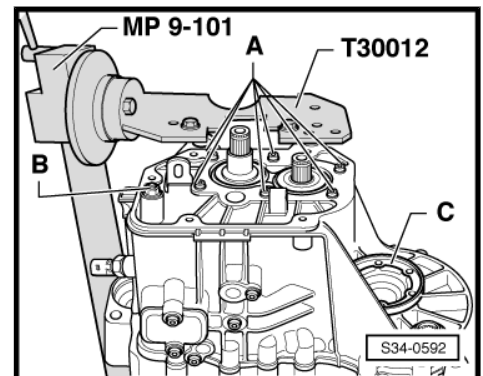
- Unscrew the cover -arrow- for the gearbox housing.



- Pull out the bearing bolt -1- for the 5th gear shift fork -2- and remove gearshift fork.
- Remove circlip -3- for 5th gear synchronizer body.
- Remove circlip -4- for 5th gear pinion.
- Remove 5th gear synchronizer body and 5th gear pinion.

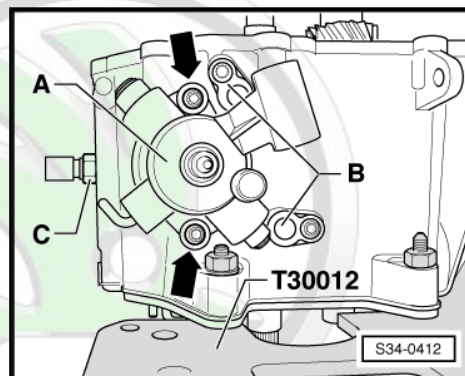


- Release the fixing screws -A- for the bearing support of the drive shaft and output shaft.
- Unscrew nut -B- for shift mechanism (fixation of the reverse).
- Turn the gearbox in the assembly support with the clutch housing upwards.
- Release fixing screws, that serve to secure the gearbox housing from the clutch housing.
- Carefully release the clutch housing from the projecting housing lands and make sure the sealing surfaces are not damaged in the process.
- Clutch housing must not tilt, so that the roller bearing and the bearing assembly on the drive shaft and output shaft are not damaged.
- Remove the differential gear from the gearbox housing.
- For transmissions for vehicles with a start-stop system: remove gearbox neutral position sensor - G701- -arrow-.





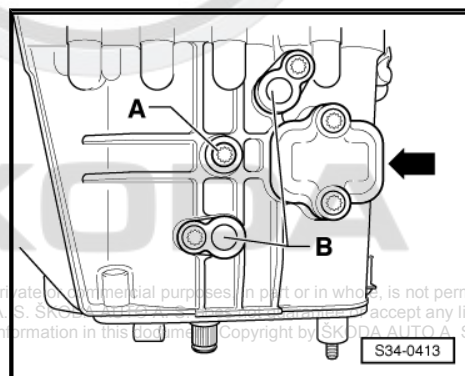
- Remove the gearshift shaft with cover -A-; to do this, put the gearshift shaft in idle position. Subsequently unscrew screws -arrows- and remove the gearshift shaft from the gearbox housing.
- Remove the bearing pins -B- at the top of the gearbox.
- Unscrew the reversing lights switch -C-.



- Unscrew the screw -A- for securing the shaft for reverse gear.
- Remove the bearing pins -B- at the bottom of the gearbox.

**Note**

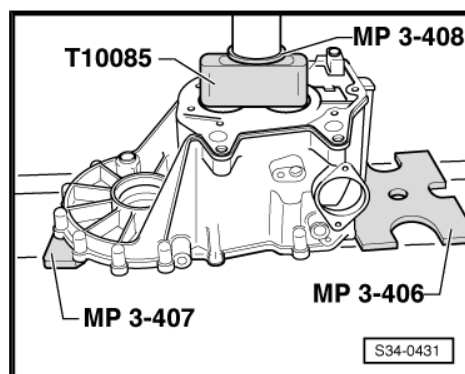
Do not remove the cover -arrow- to disassemble the gearbox.



- Press off the drive shaft and output shaft together with the bearing support, gearshift mechanism (shift forks) and reverse gear.

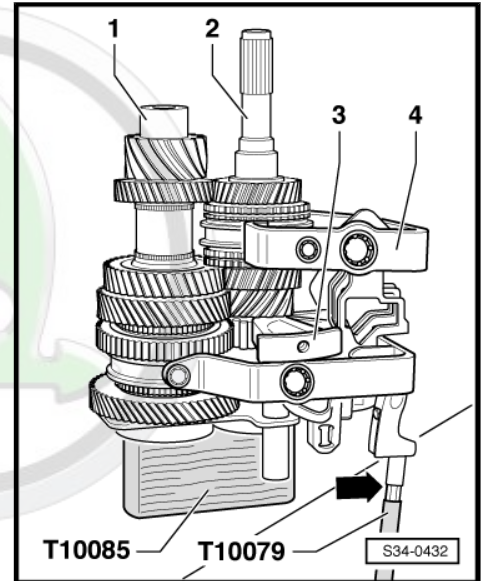
**Note**

- ◆ *Position the gearbox housing in such a way that the dowel sleeves in the gearbox housing are not damaged.*
- ◆ *During the pressing off procedure request the assistance of second mechanic to prevent components from falling.*
- Pressing off the drive and output shaft from the bearing support for grooved ball bearings
⇒ [g r.35 "Gears, shafts", page 152](#) .

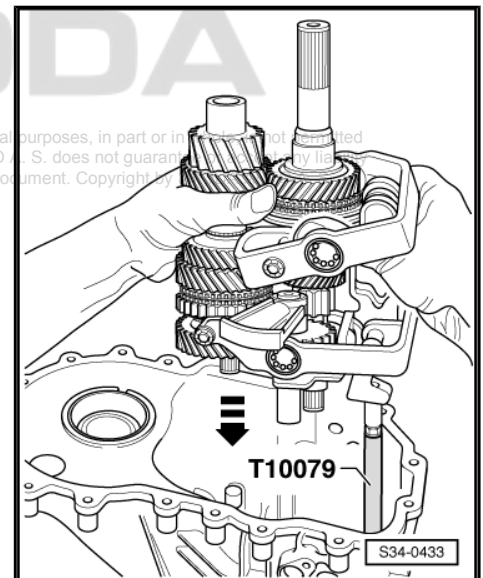
**Assembling****Note**

- ◆ *Press the drive and output shaft into the bearing support for grooved ball bearings ⇒ [g r.35 "Gears, shafts", page 152](#) .*
- ◆ *Pressing the sleeve of the 5th gear sliding gear needle bearing onto the drive shaft
⇒ ["1.2 Disassembling and assembling the drive shaft", page 154](#) .*

- Place the assembled components drive shaft -2-, output shaft -1- with bearing support for grooved ball bearings in the pressure plate -T10085- .
- Insert the gearshift mechanism (shift forks) -4- in the sliding sleeves of the shaft.
- Insert the shaft for reverse gear -3- with the reverse gear.
- Screw guide bolts - T10079- to the threaded bolts (Fitting reverse gear) -arrow-.



- Insert the components together into the gearbox housing, by passing the guide bolt - T10079- through the fixing holes of the gearshift mechanism in the gearbox housing.
- Unscrew guide bolt - T10079- .
- Check before pressing on the bearing support.

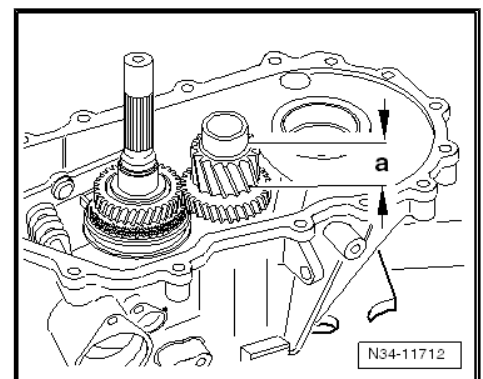


- ◆ To click in the shift forks into the sliding sleeves correctly.
- ◆ Dimension -a- of the output shaft serration.



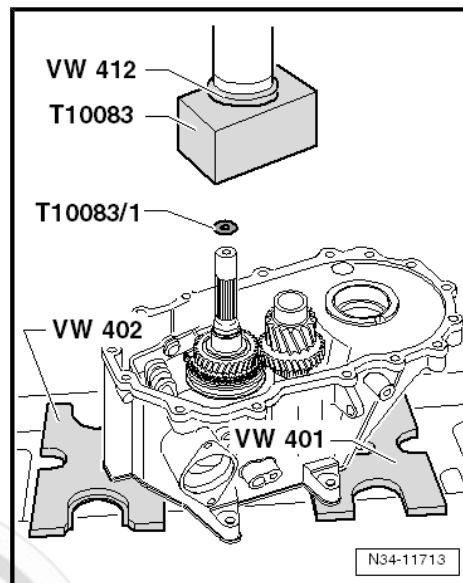
Note

- ◆ The drive shafts of the individual gearboxes have different lengths due to the different heights of the serration, dimension -a-.
 - ◆ In order to press in the drive shaft and the output shaft at the same time, a 3 mm thick washer - T10083/1- must be positioned onto the drive shaft, if necessary.
 - ◆ Therefore, the dimension -a- of the output shaft serration must be measured.
- Dimension -a- = 30.6 mm

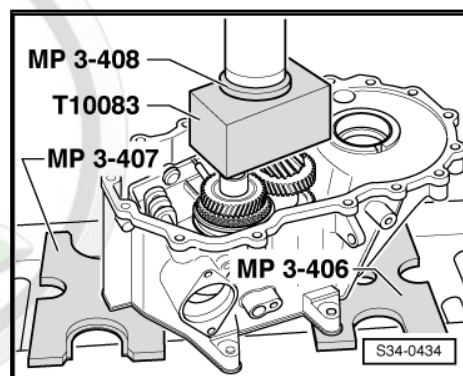




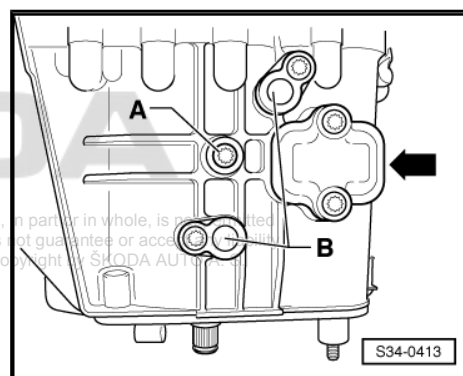
- Fit the washer - T10083/1- onto the drive shaft and carefully press in the bearing support together with the drive shaft and the output shaft up to the stop.



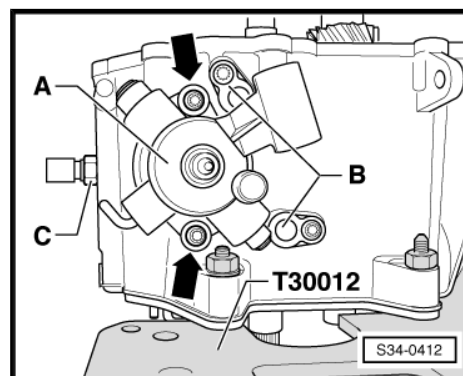
- Carefully press on the bearing support with the drive and output shaft up to the arrester.



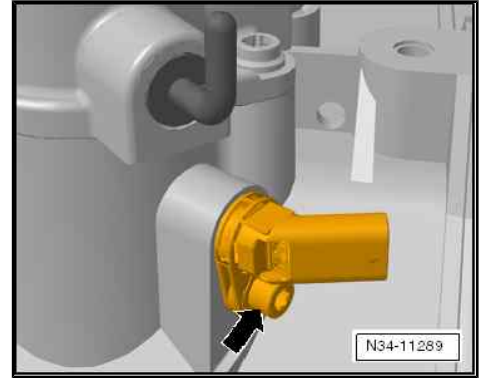
- Tighten the screw -A- for the shaft for reverse gear.
- Install the bearing pins -B- at the bottom of the gearbox.



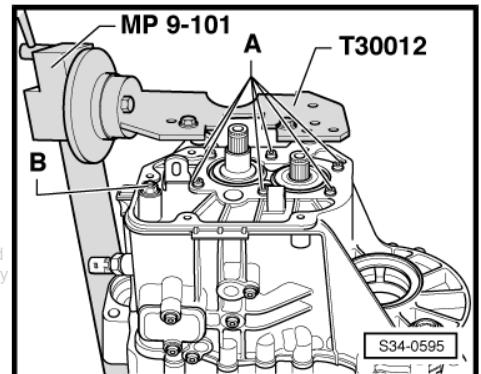
- Screw on the reversing lights switch -C-.
- Install the bearing pins -B- at the top of the gearbox.
- Put the shift rails in neutral position.
- Apply sealant - AMV 188 200- uniformly on the sealing surface of the gearshift cover.
- Install the gearshift shaft with cover -A-. Subsequently tighten the screws -arrows-.



- For transmissions for vehicles with a start-stop system: Insert and tighten gearbox neutral position sensor - G701- -arrow-.



- Use new screws -A- to secure the bearing support to the drive shaft and output shaft.
- Gradually tighten the screws according to the corresponding torque starting from the middle and crosswise .
- Tighten hexagon nut -B- for the gearshift mechanism (shift forks).
- Insert differential gear.
- Apply sealant - AMV 188 200- uniformly on the sealing surface.
- Screw down the clutch housing onto the gearbox housing.
- Turn the gearbox in the assembly stand with the clutch housing upwards.

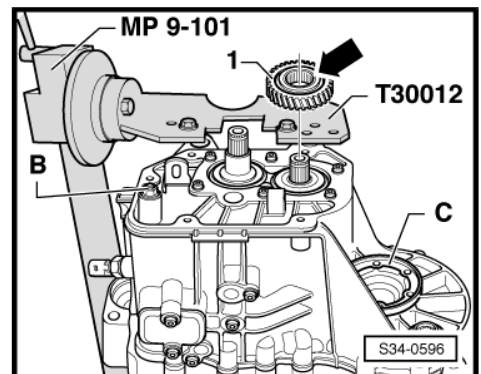


- Fit the 5th gear pinion -1-.

Fitting position of the 5th gear pinion:

The highest collar -arrow- points to the gearbox housing cover.

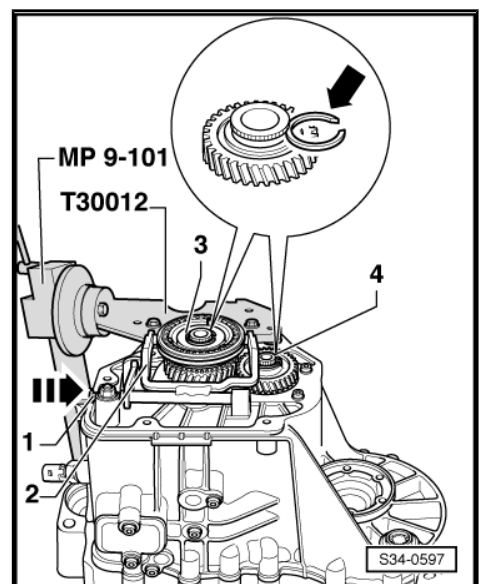
- Mount the 5th gear sliding gear with needle bearing.
- Position the 5th gear synchronizer ring on the sliding gear.
- Mount the synchronizer body 5th gear together with sliding sleeve and stop ring.



- Insert the 5th gear shift fork -2- and push the bearing pin -1- up to the stop -direction of arrow-.
- Determine the new circlip -arrow-.
- For the drive shaft -3- and output shaft -4- select the thickest possible circlip that may be installed, and fit.

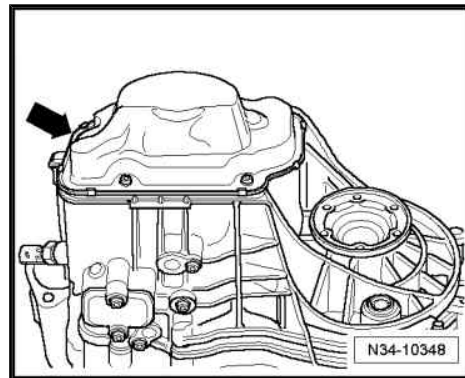
The following circlips are available ➤ Electronic Catalogue of Original Parts

Thickness (mm)	Part number
2.00	085 311 187.
2.10	085 311 187 A
2.20	085 311 187 B





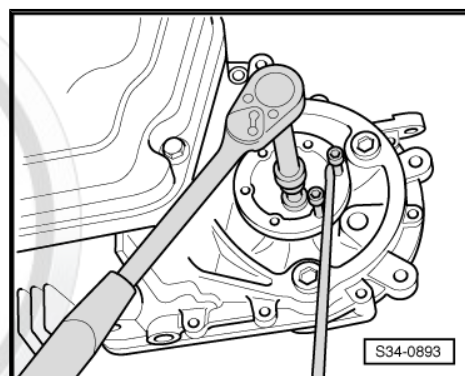
- Install the gearbox housing cover -arrow-.



- Install both flange shafts with pressure springs, stop discs and conical rings.
- Install the clutch release lever together with the release bearing and guide bushing
⇒ [“1.16 Repairing the clutch release mechanism”, page 55](#) .
- Pour in gear oil
⇒ [“6.1 Checking the gear oil level”, page 151](#) .

Tightening torques

- ◆ ⇒ [“5.3 Summary of components- Gearbox housing cover”, page 148](#)
- ◆ ⇒ [“4.4 Summary of components - input shaft, output shafts, differential gear and shift rods”, page 133](#)
- ◆ ⇒ [“5.1 Summary of components - Clutch housing”, page 145](#)



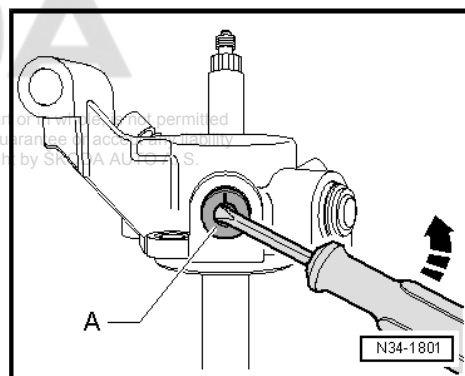
4.7 Repairing gearshift unit

Special tools and workshop equipment required

- ◆ Thrust piece - T10203-
- ◆ Pipe section - MP3-479 (VW 423)-

Remove locking bolt -A- from gearshift cover

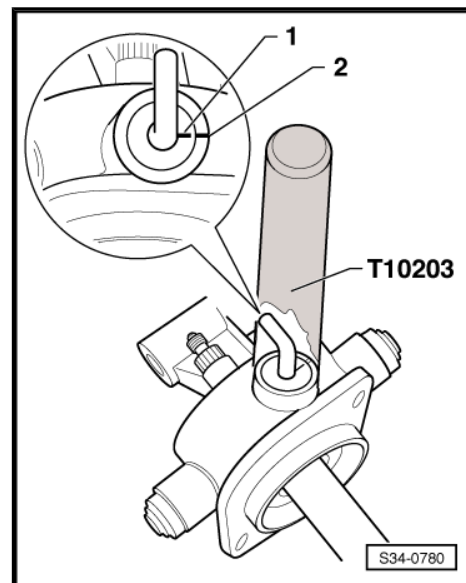
- Remove the outer part of the locking bolt.
- Then lever out locking bolt carefully with a screwdriver.



Drive locking bolt -A- into gearshift cover

Fitting position:

The marking -1- points towards the marking -2- on the gearshift cover.



4.8 Disassembling and assembling the gearshift forks

Special tools and workshop equipment required

- ◆ Driver - MP1-304 (10-206)-
- ◆ Pressure plate - MP3-407 (VW 402)-
- ◆ Pressure spindle - MP3-448 (VW 408 A)-
- ◆ Thrust piece - MP3-453 (VW 431)-
- ◆ Thrust washer - MP3-455 (VW 447 H)-
- ◆ Distance sleeve - MP3-458 (VW 472)-
- ◆ Removal tool for inner lining of the door panel - MP8-602/1-

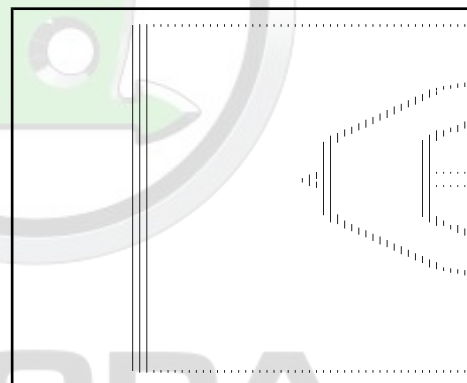
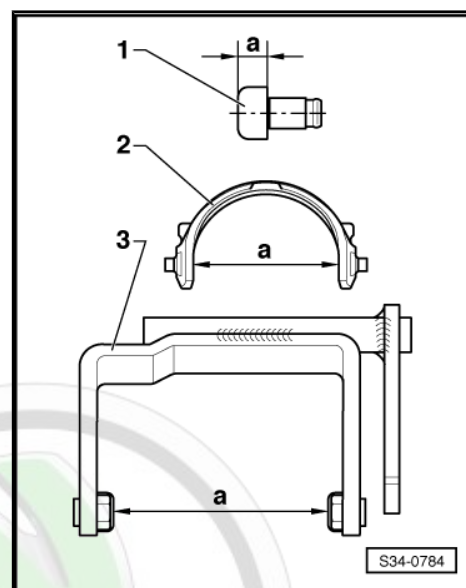
Identification of shift segments and 5th gear shift fork with shift segments

Dimension -a-

- 1 - Shift segments 1st/2nd gear = 10.2 mm
- 2 - 3rd/4th gear shift segment = 78.6 mm
- 3 - 5th gear shift fork with shift segments = 79.5 mm

1st/2nd gear shift fork with shift segments

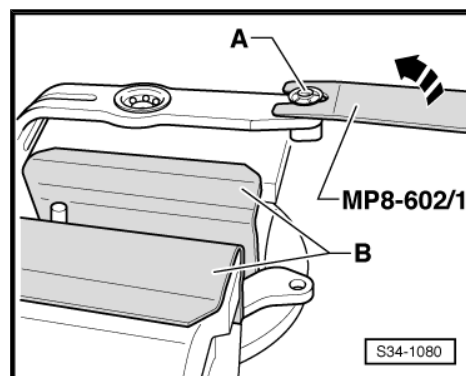
Dimension -a- = 75 mm.





Removing the circlip

- Secure the shift fork in a vice fitted with protective jaws -B-.
- Lift off the circlip -A- in the direction of the arrow.



Fitting the circlip

- Press the circlip with a handle wrench into the slot of the shift segment.

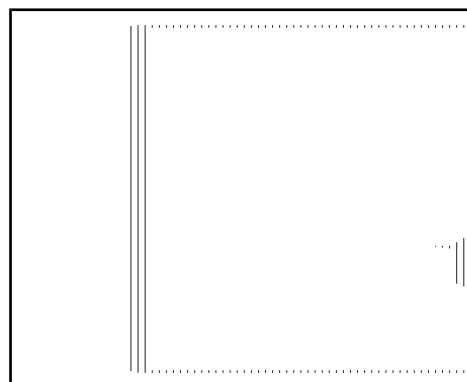


Note

It must still be possible to rotate the shift segment freely once the circlip has been fitted.

A - Handle wrench, wrench size 10

B - Protective jaws



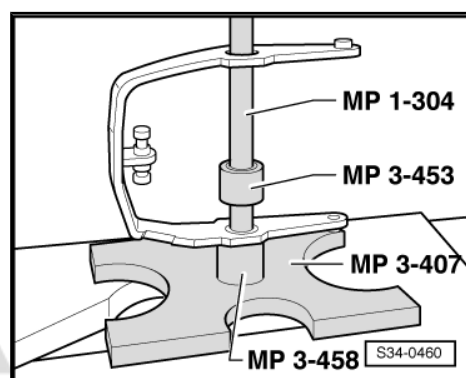
Pressing off angular ball bearing



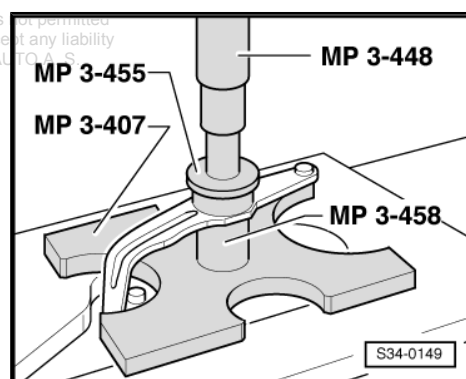
Note

Do not bend the shift forks when removing and installing the angular ball bearings.

The inner ring must lock with the outer ring.



Insert the angular ball bearing up to the stop into the gearshift fork



5 Gearbox housing, clutch housing

⇒ [“5.1 Summary of components - Clutch housing”, page 145](#)

⇒ [“5.2 Summary of components - Gearbox housing and clutch housing”, page 146](#)

⇒ [“5.3 Summary of components- Gearbox housing cover”, page 148](#)

⇒ [“5.4 Repairing gearbox housing”, page 149](#)

⇒ [“5.5 Repairing clutch housing”, page 149](#)

5.1 Summary of components - Clutch housing

1 - Conical screw, 25 Nm

2 - Flange shaft with pressure spring

- ☐ Removing and installing
⇒ [“1.3 Replacing right sealing ring”, page 171](#)

3 - 5 Nm + torque a further 90°
(1/4 turn)

- ☐ Replace after disassembly

4 - Clutch housing

- ☐ repairing
⇒ [“5.5 Repairing clutch housing”, page 149](#)

5 - Gearbox housing

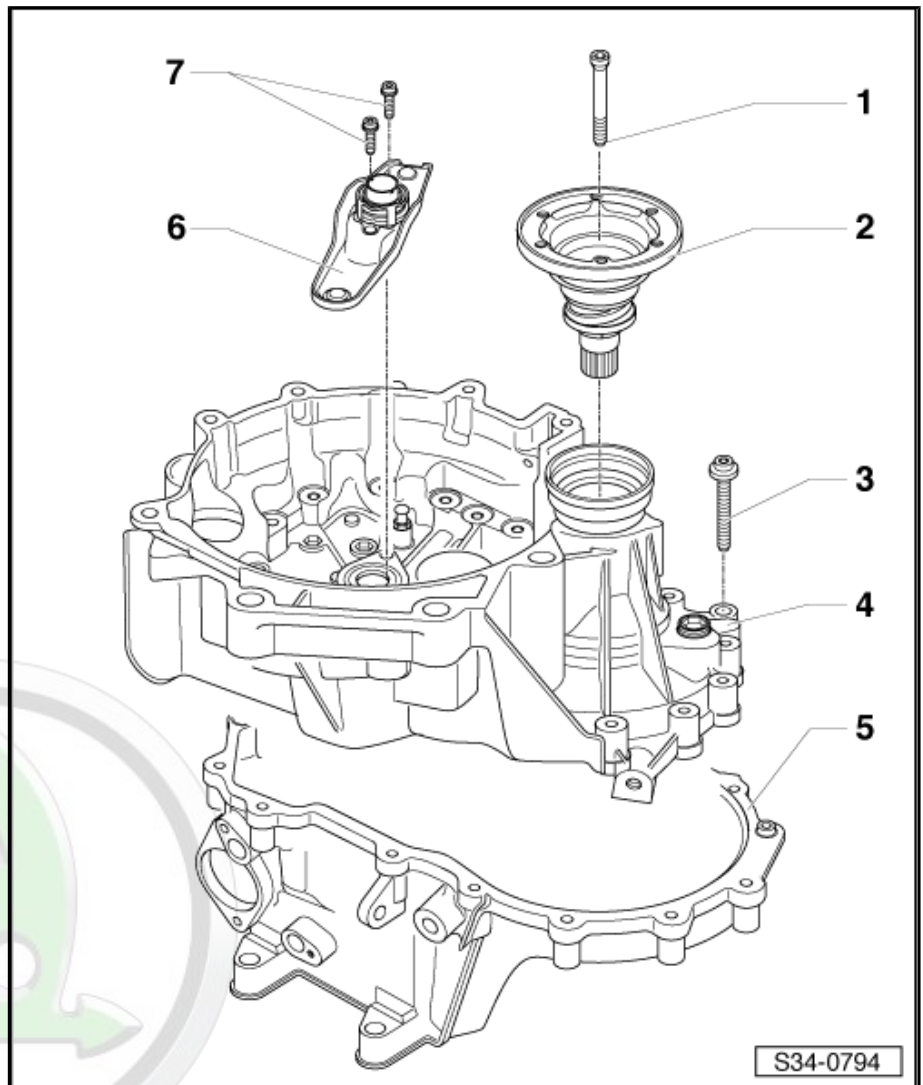
- ☐ repairing
⇒ [“5.4 Repairing gearbox housing”, page 149](#)

6 - Release lever

- ☐ with guide bushing and clutch release bearing
- ☐ Removing and installing
⇒ [“1.16 Repairing the clutch release mechanism”, page 55](#)

7 - 5 Nm + torque a further 90°
(1/4 turn)

- ☐ removing and installing:



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5.2 Summary of components - Gearbox housing and clutch housing

1 - Bushing

- ☐ for gearshift shaft
- ☐ extracting ⇒ [page 149](#)
- ☐ drive in ⇒ [page 149](#)

2 - Fitting sleeve

3 - Magnet

- ☐ is held in position by the separator surface of the housing

4 - Cover

- ☐ Before screwing down apply sealing agent - AMV 188 200-

5 - Circlip

- ☐ inserted in the cylinder roller bearing groove

6 - Circlip

- ☐ inserted in the cylinder roller bearing groove

7 - Roller bearing

- ☐ for drive shaft
- ☐ extracting and inserting ⇒ [“1.2 Disassembling and assembling the drive shaft”, page 154](#)

8 - Roller bearing

- ☐ for output shaft
- ☐ extracting and inserting ⇒ [“2.2 Disassembling and assembling the output shaft”, page 164](#)

9 - Clutch housing

- ☐ when replacing, adjust the differential gear ⇒ [“2.3 Adjusting the differential”, page 177](#)

10 - Input shaft seal

- ☐ release with a screwdriver
- ☐ drive in ⇒ [page 149](#)
- ☐ Replace ⇒ [“1.3 Replacing input shaft sealing ring”, page 160](#)

11 - Ball stud, 20 Nm

- ☐ grease with Grease - G 000 100-

12 - Seal ring for right flange shaft

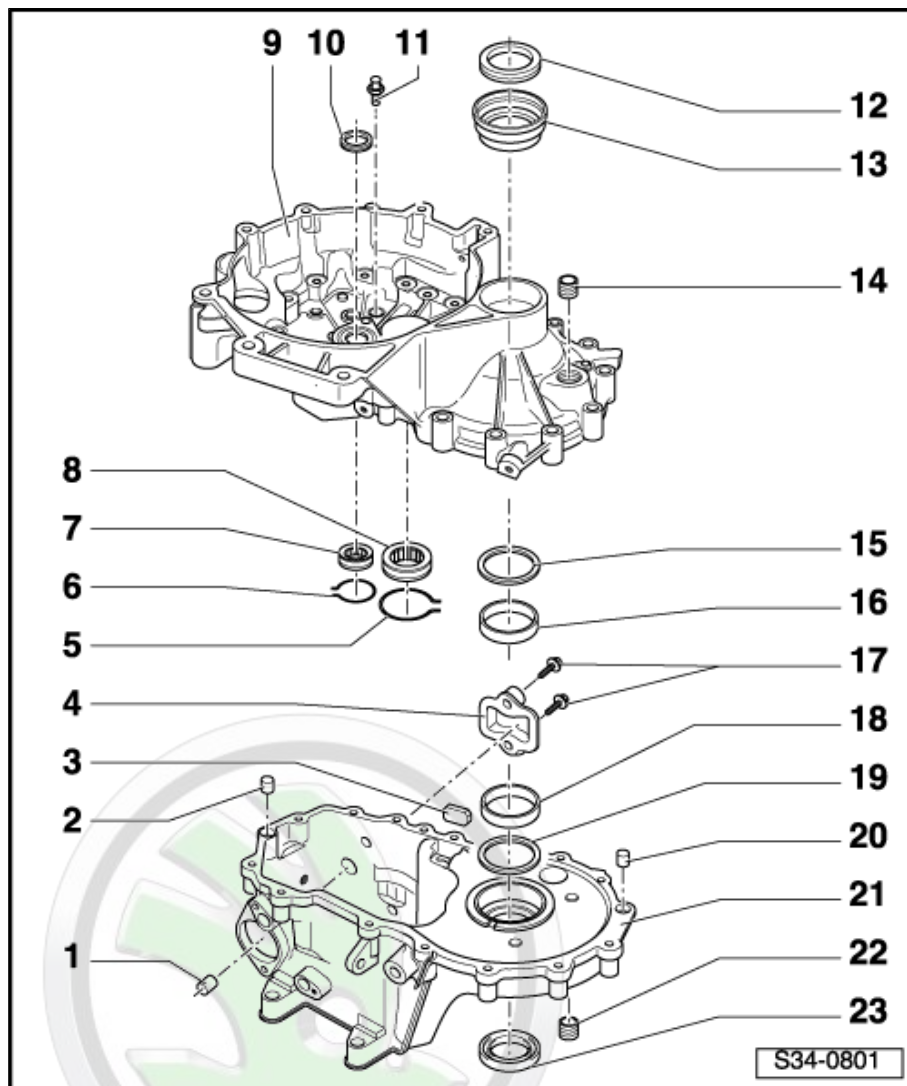
- ☐ release with a screwdriver
- ☐ installing ⇒ [“1.3 Replacing right sealing ring”, page 171](#)

13 - Bushing

- ☐ for gasket ring
- ☐ removing ⇒ [page 149](#)
- ☐ pressing on ⇒ [page 150](#)

14 - Oil filler plug

- ☐ different versions ⇒ [page 151](#)



Oil filler plug or oil drain plug with internal serration - 24 Nm

Oil filler plug or oil drain plug with hexagon socket head - 32 Nm

15 - Adjusting washer S₂

- ☐ for differential
- ☐ Determine thickness ⇒ [“2.3 Adjusting the differential”, page 177](#)

16 - Outer ring/tapered-roller bearing

- ☐ for differential
- ☐ Removing and installing ⇒ [“2.2 Disassembling and assembling differential gear”, page 174](#)
- ☐ when replacing, set the differential ⇒ [“2.3 Adjusting the differential”, page 177](#)

17 - 5 Nm + torque a further 90° (¹/₄ turn)

- ☐ Replace after disassembly

18 - Outer ring/tapered-roller bearing

- ☐ for differential
- ☐ Removing and installing ⇒ [“2.2 Disassembling and assembling differential gear”, page 174](#)
- ☐ when replacing, set the differential ⇒ [“2.3 Adjusting the differential”, page 177](#)

19 - Adjusting washer S₁

- ☐ for differential
- ☐ always 1 mm thick
- ☐ on gearboxes as of production date 12.2006, the adjusting washer S₁ is omitted for the outer ring/tapered-roller bearing ⇒ [“2.3 Adjusting the differential”, page 177](#)
- ☐ Bearing pedestal for outer ring/tapered-roller bearing is adapted

20 - Fitting sleeve

21 - Gearbox housing

- ☐ when replacing, set the differential ⇒ [“2.3 Adjusting the differential”, page 177](#)
- ☐ on gearboxes as of production date 12.2006, the adjusting washer S₁ is omitted for the outer ring/tapered-roller bearing
- ☐ Bearing pedestal for outer ring/tapered-roller bearing is adapted

22 - Oil drain plug

- ☐ different versions: ⇒ [“6.1 Checking the gear oil level”, page 151](#)

Oil filler plug or oil drain plug with internal serration - 24 Nm

Oil filler plug or oil drain plug with hexagon socket head - 32 Nm

23 - Seal ring for left flange shaft

- ☐ Replace ⇒ [“1.2 Replacing left sealing ring”, page 169](#)



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5.3 Summary of components- Gearbox housing cover

1 - Gearbox housing

- ☐ repairing
⇒ ["5.4 Repairing gear-box housing"](#),
page 149

2 - 5th gear pinion

- ☐ Removing and installing
⇒ ["4.6 Disassembling and assembling the gearbox"](#), page 135

3 - Circlip

- ☐ Replace after disassembly
- ☐ Determine thickness
⇒ [page 141](#)

4 - Seal

5 - Cover for gearbox housing



Note

*If the gearbox housing cover is fitted with the gearbox mounted, inspect the gear oil level, if necessary top up with gear oil
⇒ ["6.1 Checking the gear oil level"](#),
page 151.*

6 - 5 Nm + torque a further 90° (1/4 turn)

- ☐ Replace after disassembly

7 - Circlip

- ☐ Replace after disassembly
- ☐ Determine thickness ⇒ [page 141](#)

8 - Synchronizer body for 5th gear with sliding sleeve and stop ring

- ☐ Disassembling and assembling ⇒ ["4.6 Disassembling and assembling the gearbox"](#), page 135

9 - 5th gear synchronizer ring

10 - 5th gear pinion

11 - Needle bearing

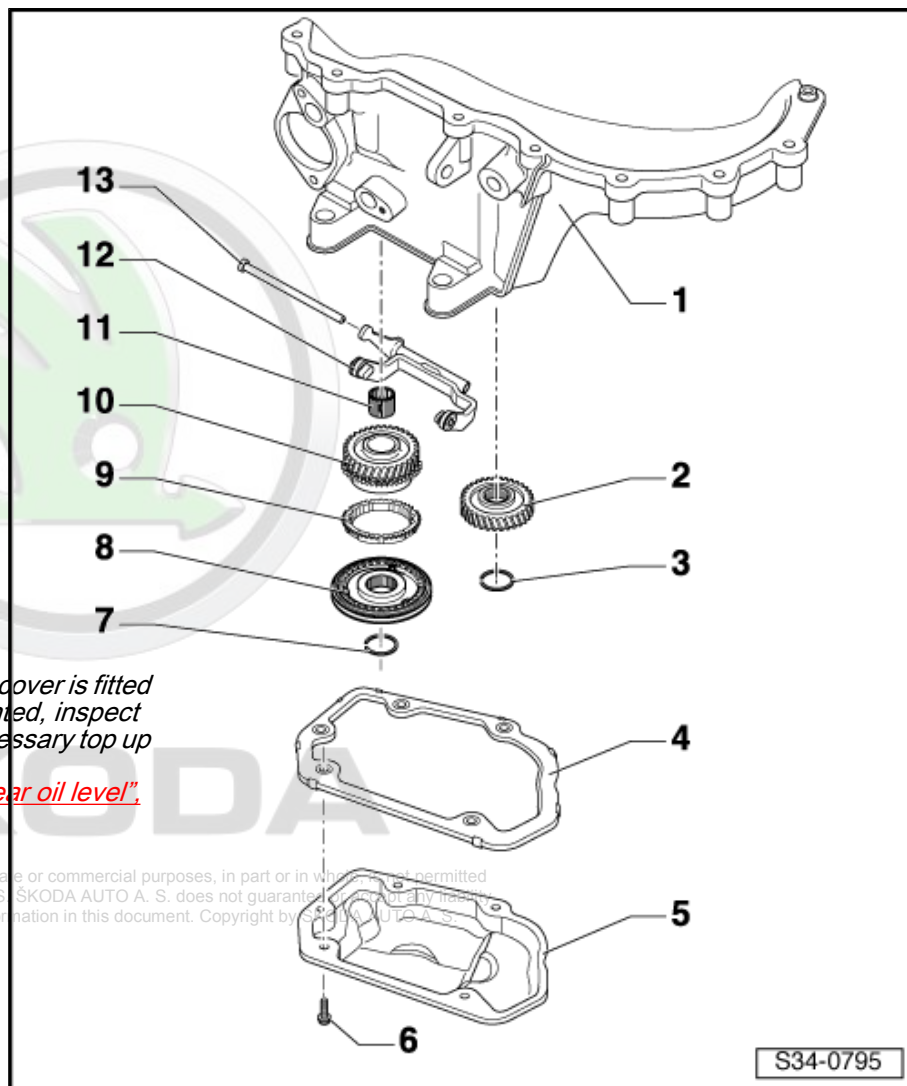
- ☐ for 5th gear

12 - 5th gear shift fork

- ☐ Disassembling and assembling ⇒ ["4.8 Disassembling and assembling the gearshift forks"](#), page 143

13 - Bearing bolt

- ☐ for 5th gear shift fork

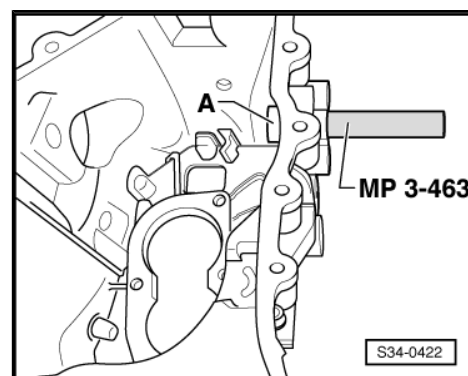


5.4 Repairing gearbox housing

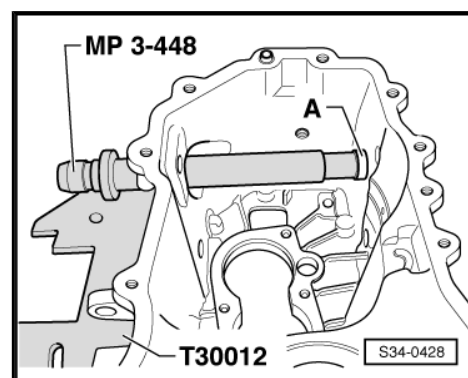
Special tools and workshop equipment required

- ◆ Pressure spindle - MP3-448 (VW 408 A)-
- ◆ Centering mandrel - MP3-463 (12-551)-

Drive out the bushing -A- for the gearshift shaft



Drive in the bushing -A- for the shift rod up to the stop



5.5 Repairing clutch housing

Special tools and workshop equipment required

- ◆ Distance sleeve - MP3-458/2-
- ◆ Thrust piece - MP3-484 (30-555)-
- ◆ Threaded rod from assembly device - MP3-434 (3066)-
- ◆ Thrust piece - MP3-420 (3124)-
- ◆ Thrust piece - T40008-
- ◆ Puller , e.g. -Kukko 18/1-
- ◆ Extractor . e.g. -Kukko 17/1-
- ◆ Grease - G 000 100-

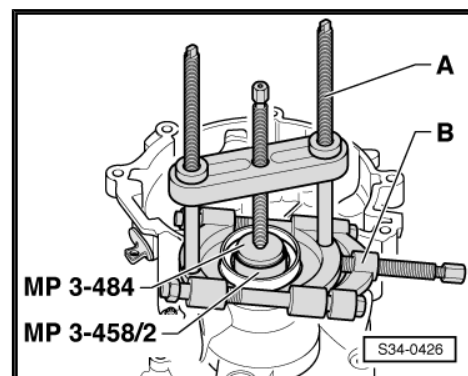
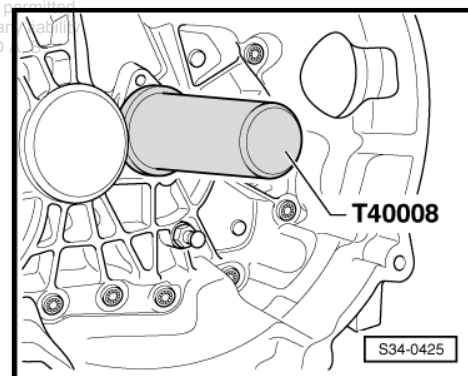
Insert the gasket ring for the drive shaft until flush

Remove bushing for gasket ring

- Position the distance sleeve - MP3-458/2- and thrust piece - MP3-484 (30-555)- on the differential gear.

A - Extractor, e.g. -Kukko 18/1-

B - Separating device, e.g. - Kukko 17/1-





Insert bushing for gasket ring

A - Screw threaded rod from assembly device - MP3-434 (3066)- into the threaded part of the differential gear.

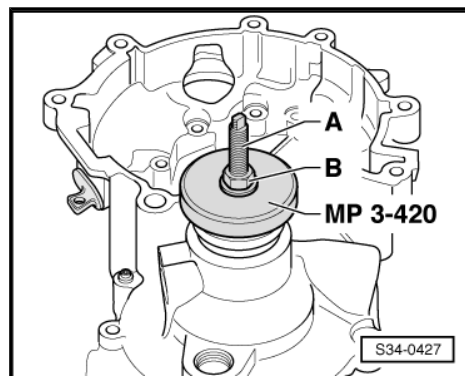
B - Nut with washer

- By turning the nut -B- insert the bushing over the pressure plate - MP3-420 (3124)- up to the stop.



Note

If the gearbox is disassembled press the bushing with pressure plate - MP3-420 (3124)- up to the stop.



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6 Gear oil

⇒ **"6.1 Checking the gear oil level", page 151**

6.1 Checking the gear oil level

Gearbox oil specification ⇒ Electronic Catalogue of Original Parts .

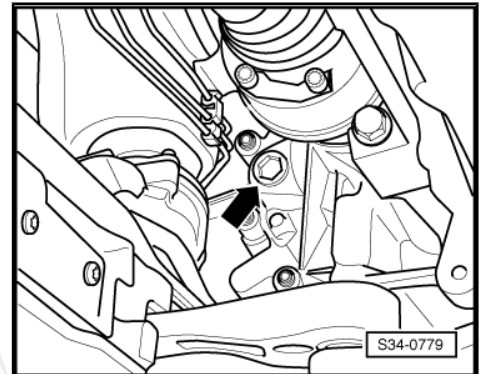
- Remove sound dampening system ⇒ General body repairs, exterior ; Rep. gr. 66 ; Noise insulation .
- Unscrew plug for inspecting gear oil -arrow-.

The oil is at the correct level if the gear is filled up to the lower edge of the oil filler hole.

- Tighten oil filler plug -arrow- to tightening torque
⇒ **page 151** .

If re-filling, note the following:

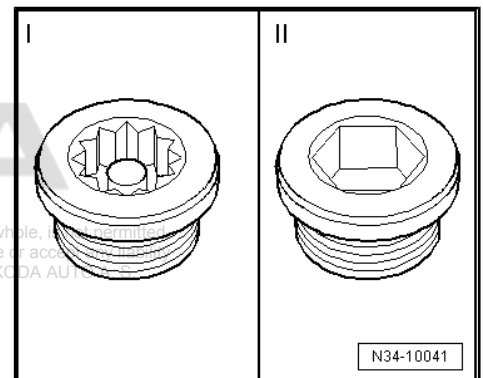
- Unscrew the plug -arrow-.
- Pour in gear oil up to lower edge of the filler hole.
- Screw in plug -arrow-.
- Start engine, engage a gear and allow gearbox to rotate for about 2 minutes.
- Switch off engine and unscrew plug -arrow-.
- Pour in gear oil again up to lower edge of the filler hole.
- Tighten oil filler plug -arrow- to tightening torque
⇒ **page 151** .
- Install the noise insulation ⇒ General body repairs, exterior; Rep. gr. 66 ; Noise insulation .



Different versions of oil filler plug

I - Oil filler plug or oil drain plug with internal serration head: 24 Nm

II - Oil filler plug or oil drain plug with internal serration head: 32 Nm



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35 – Gears, shafts

1 Drive shaft

⇒ "1.1 Summary of components - Drive shaft", page 152

⇒ “1.2 Disassembling and assembling the drive shaft”, page 154

⇒ “1.3 Replacing input shaft sealing ring”, page 160

1.1 Summary of components - Drive shaft

1 - Circlip

- ❑ Replace after disassembly
- ❑ Determine thickness
⇒ page 141

2 - Sliding sleeve with 5th gear synchronizer body

- ❑ Removing and installing
⇒ “4.6 Disassembling and assembling the gearbox”, page 135
- ❑ disassembling
⇒ page 159
- ❑ Assemble sliding sleeve/5th gear synchronizer body
- ❑ Fitting position
⇒ page 159
- ❑ on gearboxes as of production date 06.2009, the springs (pos. 27) are changed

3 - 5th gear synchronizer ring

- check for wear
⇒ page 157

4 - 5th gear pinion

5 - Needle bearing

- ☐ for 5th gear
- ☐ replace together with bushing Pos. 6

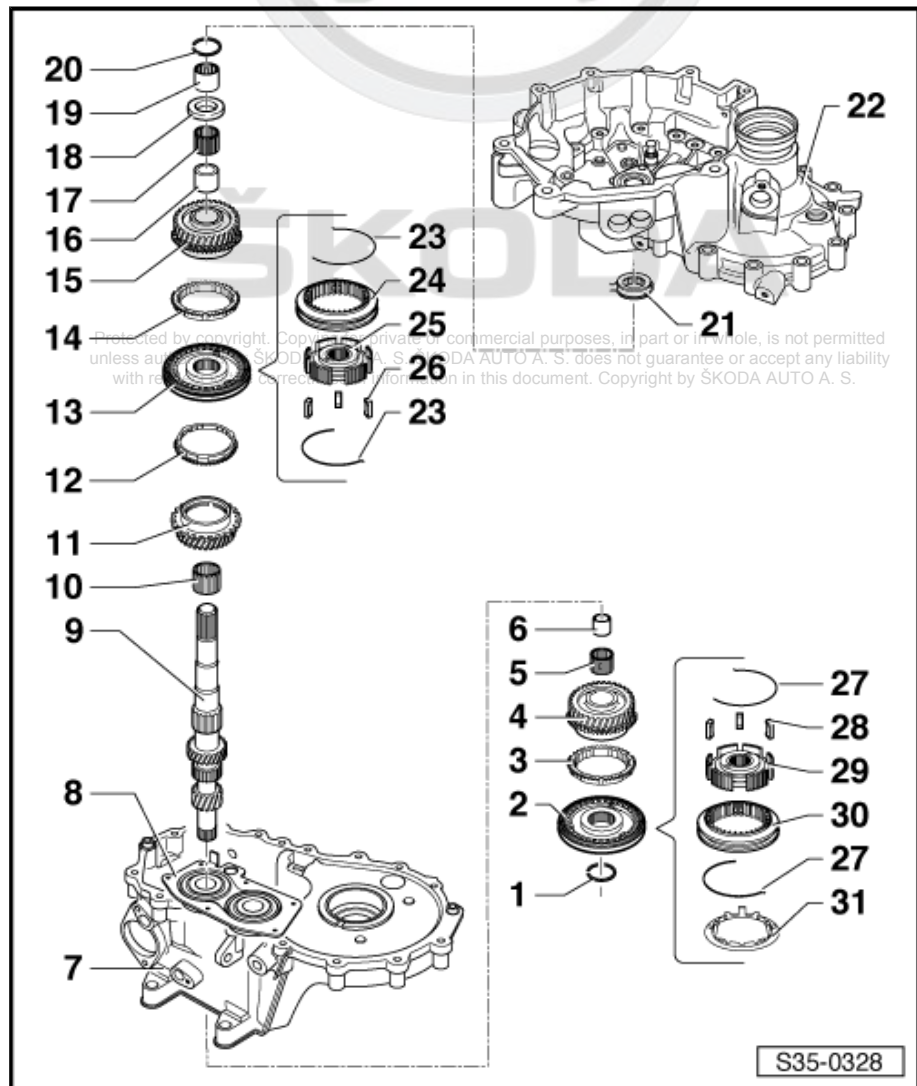
6 - Bushing

- ☐ for 5th gear needle bearing
- ☐ replace together with needle bearing Pos. 5
- ☐ press off with bearing support/grooved ball bearing ⇒ [page 155](#)
- ☐ pressing on ⇒ [page 159](#)

7 - Gearbox housing

8 - Bearing support with grooved ball bearing

- ☐ Always replace grooved ball bearing together with the bearing support
- ☐ If the bearing support is released from the gearbox housing, it must always be replaced
- ☐ pressing off ⇒ [page 155](#)



- ☐ pressing on ➤ [page 159](#)

9 - Drive shaft

10 - Needle bearing

- ☐ for 3rd gear

11 - 3rd gear pinion

12 - 3rd gear synchronizer ring

- ☐ on gearboxes as of production date 06.2009, the synchronizer ring for 3rd and 4th gear is changed ➤ Electronic Catalogue of Original Parts
- ☐ check for wear ➤ [page 157](#)

13 - Sliding sleeve with 3rd and 4th gear synchronizer body

- ☐ press off with 3rd gear sliding gear ➤ [page 156](#)
- ☐ disassembling ➤ [page 156](#)
- ☐ Fitting position sliding sleeve with synchronizer body ➤ [page 157](#)
- ☐ assembling ➤ [page 156](#)
- ☐ pressing on ➤ [page 157](#)
- ☐ on gearboxes as of production date 06.2009, the springs (pos. 23) are changed

14 - 4th gear synchronizer ring

- ☐ on gearboxes as of production date 06.2009, the synchronizer ring for 3rd and 4th gear is changed ➤ Electronic Catalogue of Original Parts
- ☐ check for wear ➤ [page 157](#)

15 - 4th gear pinion

16 - Bushing

- ☐ for cylindrical roller bearings 4th gear
- ☐ replace together with Pos. 17
- ☐ removing ➤ [page 155](#)
- ☐ installing ➤ [page 156](#)

17 - Roller bearing

- ☐ for 4th gear
- ☐ replace together with Pos. 16

18 - Thrust washer

19 - Inner ring for cylindrical-roller bearing

- ☐ removing ➤ [page 155](#)
 - ☐ pressing on ➤ [page 157](#)
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20 - Circlip

- ☐ replace
- ☐ Determine thickness ➤ [page 158](#)

21 - Roller bearing

- ☐ with circlip
- ☐ removing ➤ [page 155](#)
- ☐ pressing on ➤ [page 155](#)
- ☐ Fitting position: The circlip in the bearing points towards the drive shaft

22 - Clutch housing

- ☐ repairing ➤ ["5.5 Repairing clutch housing", page 149](#)

23 - Spring

- ☐ on gearboxes as of production date 06.2009, the springs of the sliding sleeve with synchronizer body for 3rd, 4th and 5th gear are changed (the springs are longer)
- ☐ Fitting position ➤ [page 156](#)



24 - Sliding sleeve 3rd and 4th gear

25 - 3rd and 4th gear synchronizer body

26 - Arresters (3 pieces)

27 - Spring

- ☐ on gearboxes as of production date 06.2009, the springs of the sliding sleeve with synchronizer body for 3rd, 4th and 5th gear are changed (the springs are longer)
- ☐ Fitting position ⇒ [page 156](#)

28 - Arresters (3 pieces)

29 - 5th gear synchronizer body

30 - 5th gear sliding sleeve

31 - Support ring

- ☐ prevents the arresters from wandering
- ☐ removing ⇒ [page 159](#)
- ☐ installing ⇒ [page 160](#)

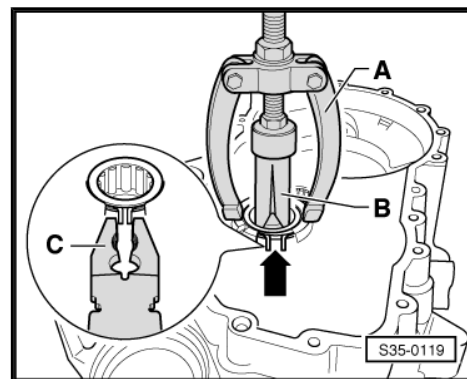
1.2 Disassembling and assembling the drive shaft

Special tools and workshop equipment required

- ◆ Drive bushing - MP1-316 (30-100)-
- ◆ Pressure plate - MP3-406 (VW 401)-
- ◆ Pressure plate - MP3-407 (VW 402)-
- ◆ Thrust piece - MP3-408 (VW 412)-
- ◆ Pipe section - MP3-414 (VW 516)-
- ◆ Thrust piece - MP3-423 (VW 407)-
- ◆ Thrust piece - MP3-431 (3002)-
- ◆ Pipe section - MP3-450 (VW 415 A)-
- ◆ Pipe section - MP3-451 (VW 422)-
- ◆ Distance sleeve - MP3-458/2-
- ◆ Flywheel type belt pulley fitting tool - MP9-400-
- ◆ Thrust piece - T10080-
- ◆ Thrust piece - T10081-
- ◆ Insert base - T10083-
- ◆ Thrust washer - T10083/1-
- ◆ Pressure plate - T10084A-
- ◆ Separating device . e.g. -Kukko 17/1-
- ◆ Puller , e.g. -Kukko 18/1-
- ◆ Interior extractor . e.g. -Kukko 21/5-
- ◆ Countersupport . e.g. -Kukko 22/1-
- ◆ Hot-air blower - V.A.G 1416-

**Note**

- ◆ When installing new pinions observe the technical data:
- ◆ Insert all bearings, gears and synchronizer rings onto the drive shaft with gear oil.
- ◆ Do not interchange the synchronizer rings, if re-used always assign to the original gear.
- ◆ On gearboxes as of production date 06.2009, the springs of the sliding sleeve with synchronizer body for 3rd, 4th and 5th gear are changed (the springs are longer), at the same time the synchronizer ring for 3rd and 4th gear is changed as of this date ⇒ *Electronic Catalogue of Original Parts*.

**Pull out the cylindrical-roller bearing from the clutch housing**

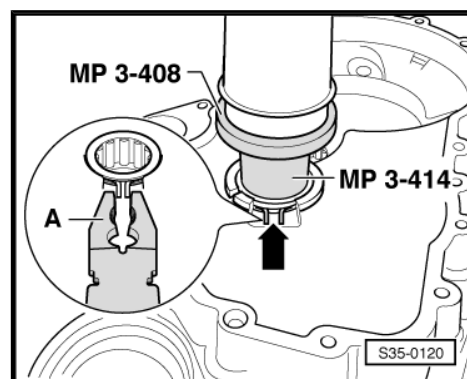
- When removing compress circlip -arrow- of the cylindrical-roller bearing with pliers -C-.

A - Countersupport . e.g. -Kukko 22/1-

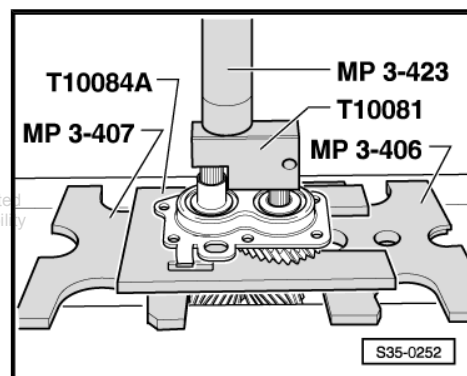
B - Interior extractor 30...37 mm , e.g. -Kukko 21/5-

Press the cylindrical-roller bearing into the clutch housing

- Support the clutch housing by positioning pipe section - MP3-450 (VW 415 A)- (not visible in figure) directly under the bearing support.
- When inserting compress circlip -arrow- of the cylindrical-roller bearing with pliers -A-.
- Remove pliers before the cylindrical-roller bearing is in fitting position. The circlip must lock into the clutch housing slot.

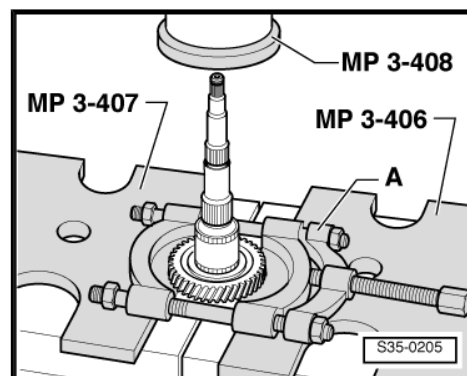
**Press out the bearing support for grooved ball bearing**

- Sliding sleeve for 1st and 2nd gear to 2nd gear.
- Slide the pressure plate - T10084 A- sideways up to stop onto the drive shaft.
- Insert the pressure plate - T10081- centering pins in the holes of the drive shaft and output shaft.

**Remove the bushing of the cylindrical-roller bearing with the 4th gear sliding gear**

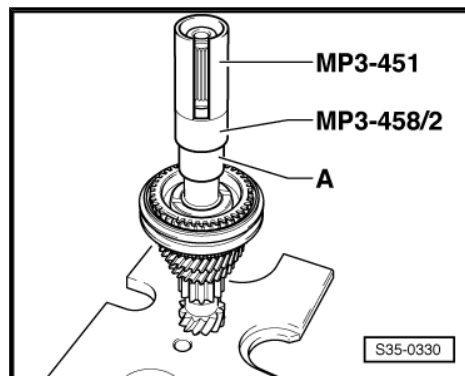
- First remove the circlip.
- Insert separating device -A- behind the running gearing (not the engaging gearing) of the 4th gear and press off.

A - Separating device 12 to 75 mm , e.g. -Kukko 17/1-

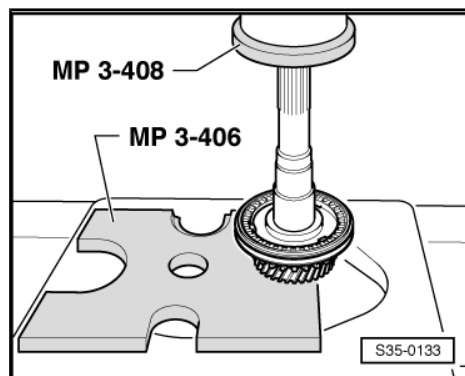


**Install the bushing of the cylindrical-roller bearing/4th gear sliding gear**

- Partly pressing on bushing -A-.
- Position cylindrical-roller bearing pos. 17 and 4th gear sliding gear.
- Gauge sleeve -A- with thrust washer pos. 18 and inner ring/ cylinder roller bearing pos. 19.

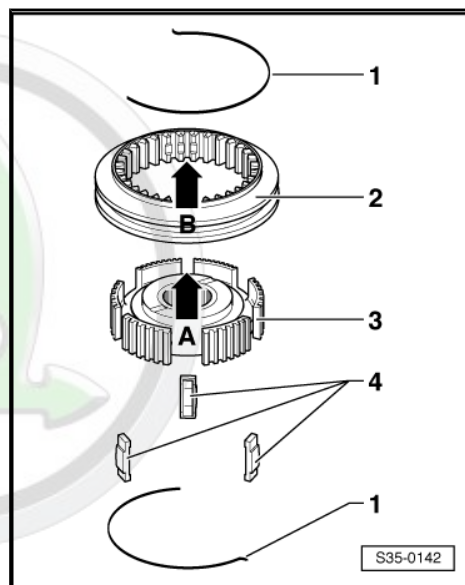
**Press on sliding sleeve with 3rd and 4th gear synchroniser body**

- After removing the circlip jointly press off the 3rd gear sliding gear and the sliding sleeve/synchronizer body.

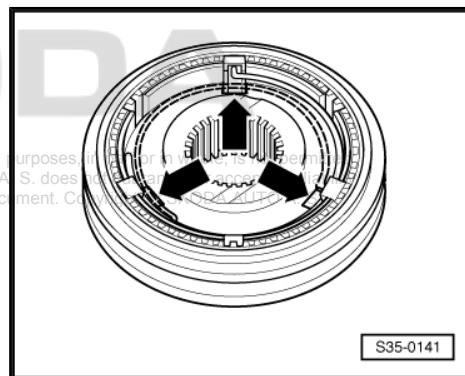
**Disassembling and assembling the sliding sleeve/3rd and 4th gear synchronizer body**

- 1 - Spring (as of production date 06.2009 the springs are longer) ⇒ Electronic Catalogue of Original Parts
 - 2 - Sliding sleeve
 - 3 - Synchronizer body
 - 4 - Arresters
- Slide the sliding sleeve over the synchronizer body.

The deeper recesses -arrow A- of the arresters in the synchronizer body and the recesses -arrow B- in the sliding sleeve must be positioned above one another.

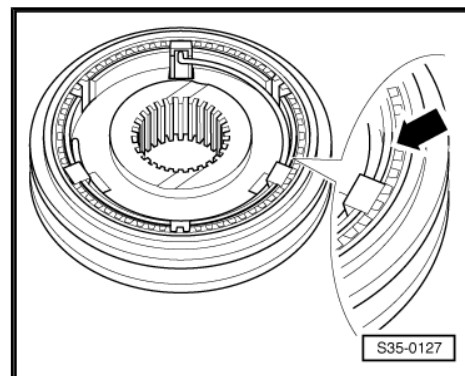
**Assemble sliding sleeve/3th and 4th gear synchroniser body**

- The sliding sleeve is drawn over the synchronizer body.
- Insert the arresters in the deeper recesses -arrows- and mount the springs with 120° offset. The angled end of the spring must grip into the hollow arrester.



Fitting position of the sliding sleeve/3rd and 4th gear synchronizer body

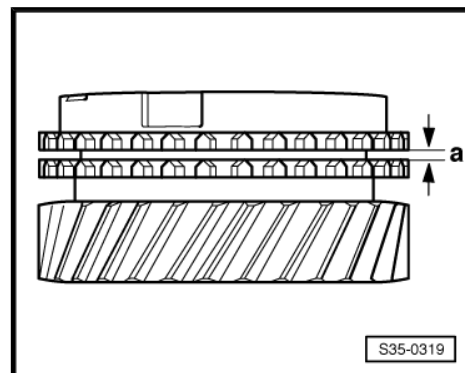
The groove on the front side -arrow- points towards the 4th gear.



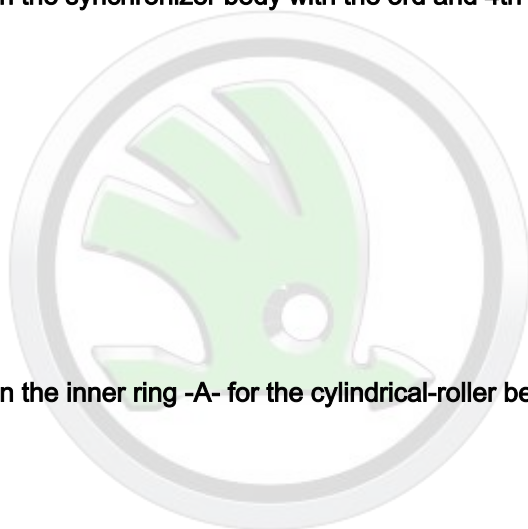
Check synchronizer ring for wear

- Press the synchronizer ring on the cone of the sliding gear and measure clearance -a- with a feeler gauge.

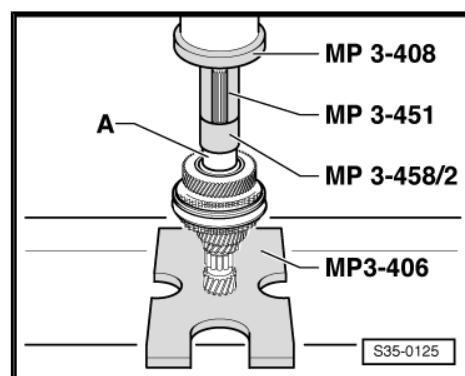
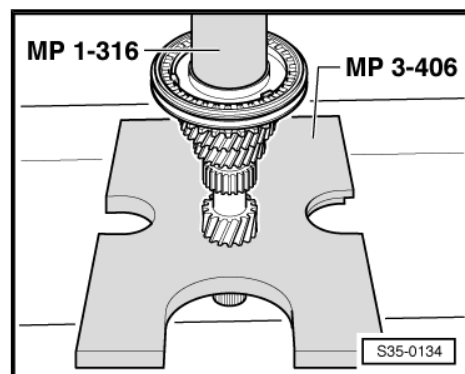
Dimension -a-	Installation dimension	Wear limit
3rd, 4th and 5th gear	1.1 ... 1.7 mm	0.5 mm



Press on the synchronizer body with the 3rd and 4th gear sliding sleeve



Press on the inner ring -A- for the cylindrical-roller bearing



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**Determining the circlip thickness**

- Insert circlip with a thickness of 2.0 mm in the slot of the drive shaft and push upwards.
- Measure the dimension between the inner ring of the taper roller bearing and the positioned circlip using a feeler gauge.
- Remove the circlip used to take the measurement.
- Determine thickness of circlip according to the table.

**Note**

Assign the circlips via the ➔ *Electronic catalogue of original parts*.

The following circlips are available:

Measured value (mm)	Circlip thickness (mm)	Axial play (mm)
0.05-0.14	2.0	0.05-0.15
0.15-0.24	2.1	0.05-0.15
0.25-0.34	2.2	0.05-0.15
0.35-0.44	2.3	0.05-0.15
0.45-0.51	2.4	0.05-0.10

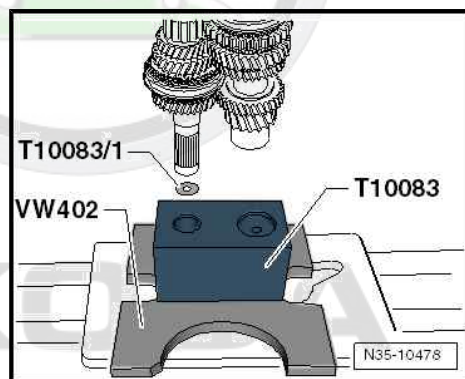
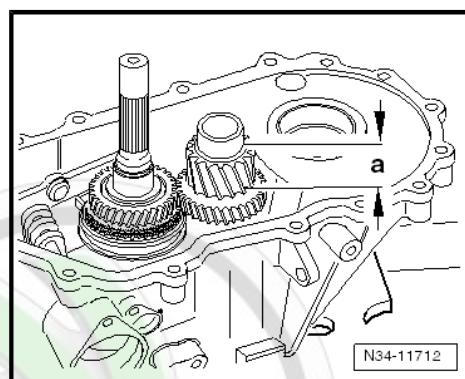
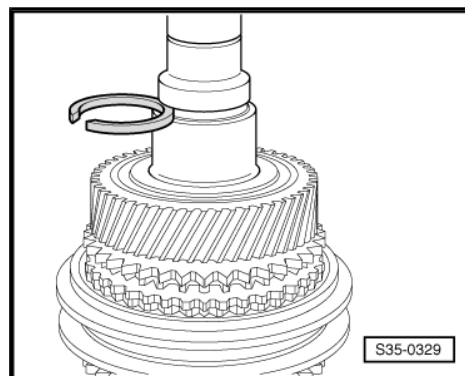
Press the bearing support for grooved ball bearings onto the drive shaft and output shaft

**Note**

- ◆ *The drive shafts of the individual gearboxes have different lengths due to the different heights of the serration, dimension -a-.*
- ◆ *In order to press in the bearing support evenly onto the shafts, it is necessary that the shafts are also positioned evenly on the insert base - T10083- .*
- ◆ *A 3 mm thick washer - T10083/1- must be inserted in the fastening opening of the drive shaft, if necessary ➔ [page 158](#) .*
- ◆ *Therefore, the dimension -a- of the output shaft serration must be measured.*

- Dimension -a- = 30.6 mm

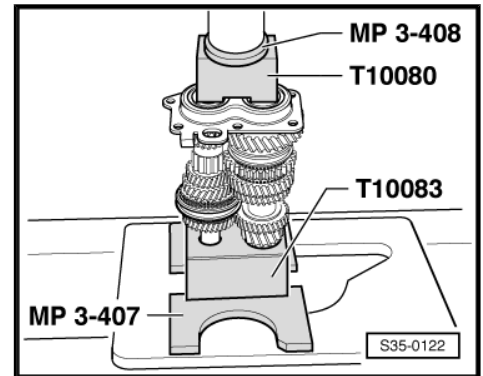
Insert washer - T10083/1-



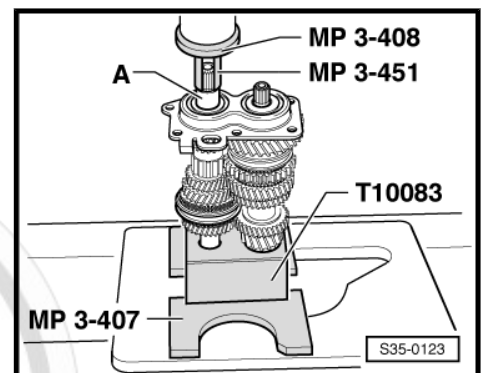
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Press on the bearing support for grooved ball bearing

- Before pressing on the bearing support heat it with the hot-air blower - V.A.G 1416- to approximately 100°C.

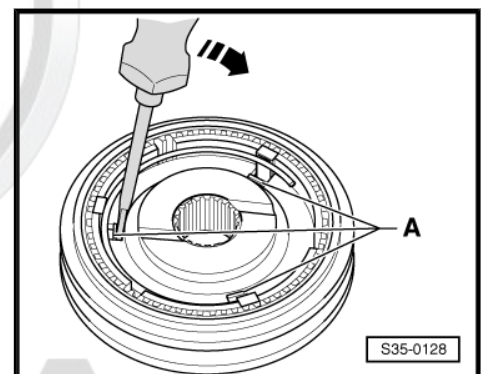


Press on the bushing -A- for the 5th gear needle bearing



Remove supporting ring

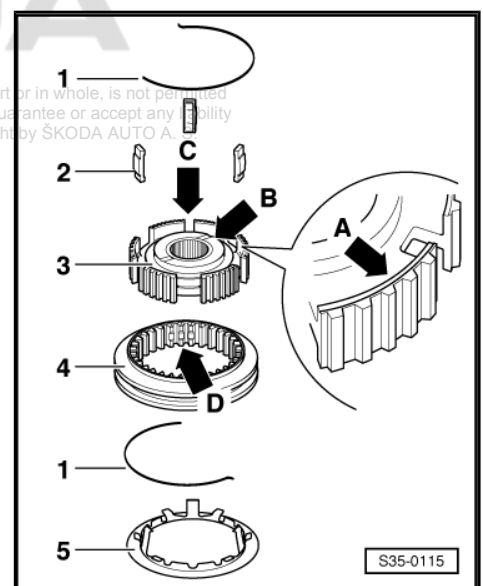
- Unclip the hook -A- of the supporting ring from the synchronizer body with a screwdriver.



Disassembling and assembling the sliding sleeve/5th gear synchronizer body

- 1 - Spring (as of production date 06.2009 the springs are longer) ➔ Electronic Catalogue of Original Parts
 - 2 - Arresters
 - 3 - Synchroniser body; fitting position: the groove on the front side -arrow A- and the wide collar -arrow B- point towards the 5th gear.
 - 4 - Sliding sleeve
 - 5 - Support ring
- Slide the sliding sleeve over the synchronizer body.

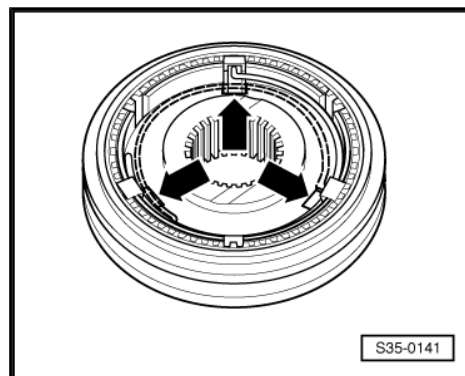
The deeper recesses -arrow C- of the arresters in the synchronizer body and the recesses -arrow D- in the sliding sleeve must be positioned above one another.





Assemble sliding sleeve/5th gear synchronizer body

- The sliding sleeve is drawn over the synchronizer body.
- Insert the arresters in the deeper recesses -arrows- and mount the springs with 120° offset. The angled end of the spring must grip into the hollow arrester.

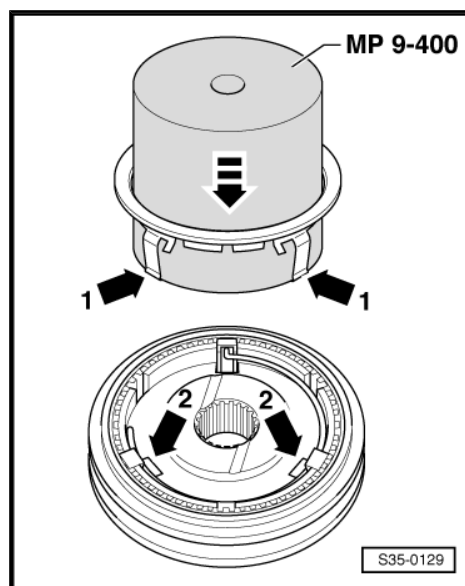


Install supporting ring

- Press the supporting ring onto the flywheel type belt pulley fitting tool -MP 9-400-.
- Insert the supporting ring together with the fitting tool in the synchronizer body/5th gear sliding sleeve (Observe fitting position ➔ [page 159](#)).

The hooks -arrow 1- are engaged in the recesses -arrow 2- of the synchronizer body.

- Push the supporting ring down until the hooks click into position.



1.3 Replacing input shaft sealing ring

Special tools and workshop equipment required

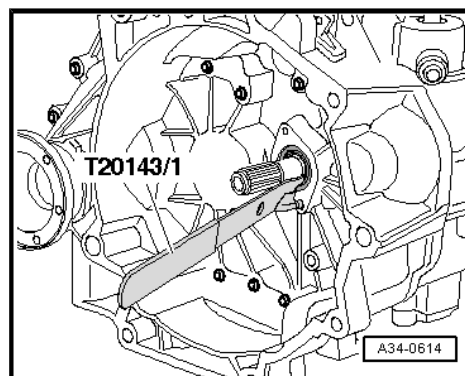
- ◆ Ejection lever - T20143/1-
- ◆ Thrust piece - T40008-
- ◆ Sealing grease - G 052 128 A1-

- Remove manual gearbox
➔ [“2.2 Removing the gearbox”, page 110](#)
- Remove the clutch release lever together with the clutch release bearing and the guide bushing
➔ [“1.16 Repairing the clutch release mechanism”, page 55](#).
- Prise off gasket ring for the drive shaft.

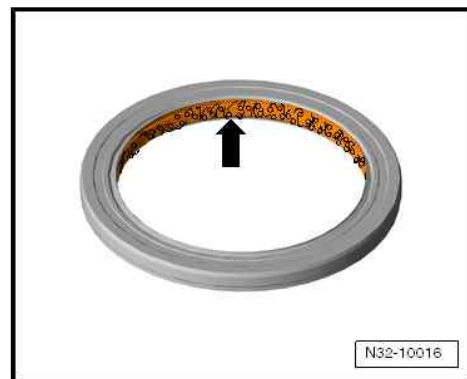


Note

Do not damage the running surface of the gasket ring on drive shaft.

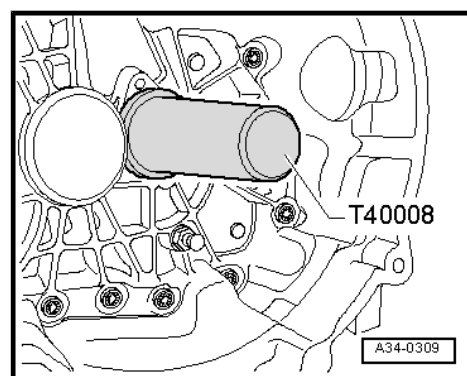


- Half fill space between sealing lip and dust lip of new gasket ring arrow with sealing grease - G 052 128 A1- .
- Slightly moisten the outer circumference of the gasket ring with gearbox oil.



Drive the gasket ring for the drive shaft until flush

- Install clutch release lever together with release bearing and guide sleeve
⇒ [“1.16 Repairing the clutch release mechanism”, page 55](#) .
- Install manual gearbox
⇒ [“2.3 Installing the gearbox”, page 122](#) .



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2 Output shaft

⇒ "2.1 Summary of components - Output shaft", page 162

⇒ "2.2 Disassembling and assembling the output shaft", page 164

2.1 Summary of components - Output shaft

1 - Clutch housing

- ☐ repairing
⇒ "5.5 Repairing clutch housing", page 149

2 - Roller bearing

- ☐ with circlip
- ☐ removing ⇒ page 164
- ☐ pressing on
⇒ page 164
- ☐ Fitting position: The circlip in the bearing points towards the output shaft

3 - Output shaft

- ☐ if the inner ring is fitted as a cylindrical-roller bearing Pos. 2, it cannot be removed from the output shaft
- ☐ Inspect bearing assembly or inner ring for cylindrical-roller bearing for scoring and damage
- ☐ Replace output shaft and cylindrical-roller bearing together if there is scoring or damage on the bearing assembly or inner ring

4 - 4th gear pinion

- ☐ Fitting position: Shoulder points to the 3rd gear ⇒ page 165

5 - Circlip

- ☐ Replace after disassembly

6 - Circlip

- ☐ Replace after disassembly

7 - 3rd gear pinion

- ☐ Fitting position: Shoulder points to the 4th gear ⇒ page 165

8 - Circlip

- ☐ Replace after disassembly

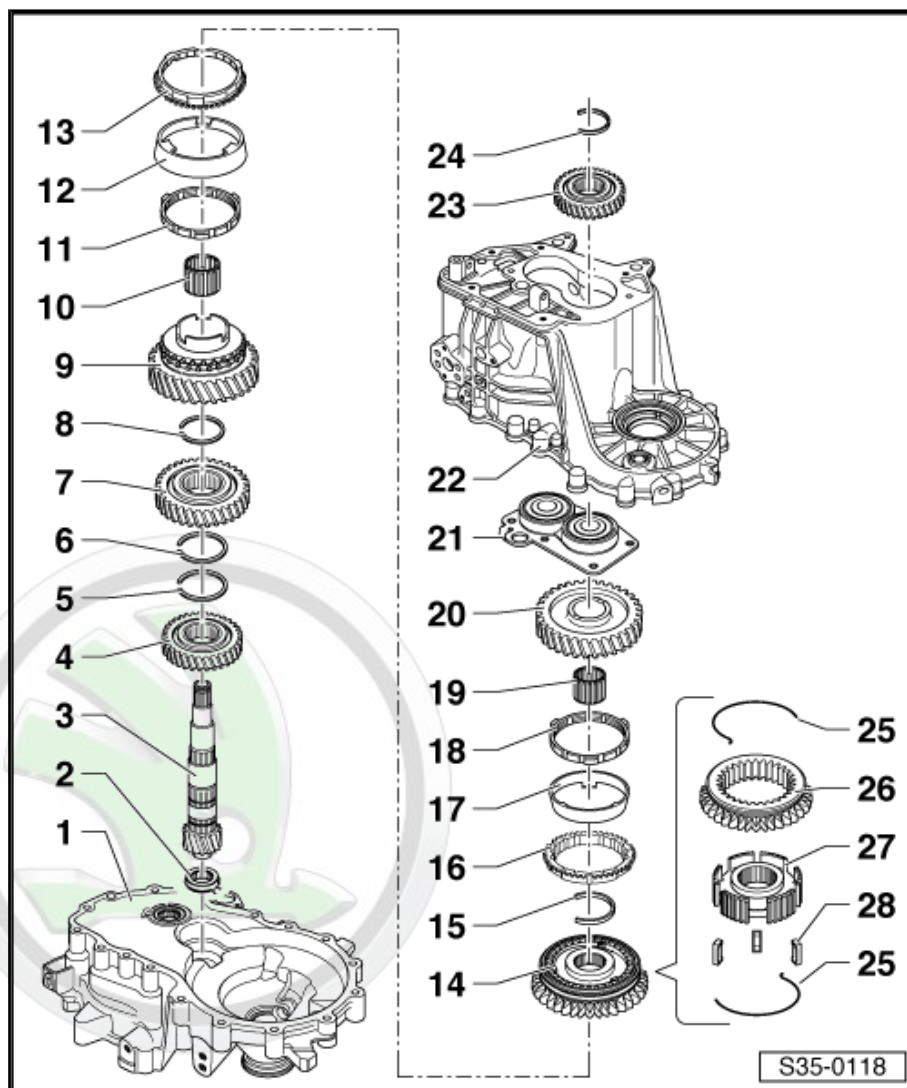
9 - 2th gear pinion

10 - Needle bearing

- ☐ for 2nd gear

11 - Inner ring for 2nd gear

- ☐ check for wear ⇒ page 165



- ☐ Fitting position ➤ [page 166](#)
- 12 - Outer ring for 2nd gear**
 - ☐ place onto the inner ring Pos. 11
 - ☐ replace if damaged or worn
 - ☐ Fitting position ➤ [page 166](#)
- 13 - 2nd gear synchronizer ring**
 - ☐ check for wear ➤ [page 166](#)
 - ☐ Fitting position ➤ [page 166](#)
- 14 - Sliding sleeve with 1st and 2nd gear synchronizer body**
 - ☐ after removing the circlip pos. 15 press off together with the 2nd gear sliding gear ➤ [page 165](#)
 - ☐ disassembling ➤ [page 166](#)
 - ☐ Assembling sliding sleeve/synchronizer body ➤ [page 166](#) and ➤ [page 167](#)
 - ☐ Fitting position ➤ [page 166](#)
 - ☐ pressing on ➤ [page 167](#)
- 15 - Circlip**
 - ☐ pushing out ➤ [page 165](#)
 - ☐ inserting ➤ [page 167](#)
- 16 - 1st gear synchronizer ring**
 - ☐ check for wear ➤ [page 166](#)
 - ☐ insert in such a way that the recesses lock into the arresters of the sliding sleeve Pos. 14
- 17 - Outer ring for 1st gear**
 - ☐ insert into synchronizer ring Pos. 16
 - ☐ Fitting position ➤ [page 167](#)
 - ☐ replace if damaged or worn
- 18 - Inner ring for 1st gear**
 - ☐ check for wear ➤ [page 165](#)
 - ☐ Check pegs for traces of wear
 - ☐ Fitting position ➤ [page 168](#)
- 19 - Needle bearing**
 - ☐ for 1st gear
- 20 - 1st gear pinion**
 - ☐ Fitting position ➤ [page 168](#)
- 21 - Bearing support for grooved ball bearing**
 - ☐ Always replace grooved ball bearing together with the bearing support
 - ☐ If the bearing support is released from the gearbox housing, it must always be replaced
 - ☐ pressing in and pressing out ➤ ["2.2 Disassembling and assembling the output shaft", page 164](#)
- 22 - Gearbox housing**
 - ☐ repairing ➤ ["5.4 Repairing gearbox housing", page 149](#)
- 23 - 5th gear pinion**
 - ☐ Fitting position: collar points towards the cover of the gearbox housing
 - ☐ Removing and installing ➤ ["2.2 Disassembling and assembling the output shaft", page 164](#)
- 24 - Circlip**
 - ☐ Replace after disassembly
 - ☐ Determine thickness ➤ ["2.2 Disassembling and assembling the output shaft", page 164](#)
- 25 - Spring**
 - ☐ Fitting position ➤ [page 167](#)



26 - Sliding sleeve

27 - Synchronizer body

28 - Arresters (3 pieces)

2.2 Disassembling and assembling the output shaft

Special tools and workshop equipment required

- ◆ Pressure plate - MP3-407 (VW 402)-
- ◆ Pressure spindle - MP3-408 (VW 412)-
- ◆ Pressure spindle - MP3-423 (VW 407)-
- ◆ Pipe section - MP3-450 (VW 415 A)-
- ◆ Thrust piece - MP3-4014 (VW 432)-
- ◆ Drive bushing - MP3-427 (40-21)-
- ◆ Interior extractor . e.g. -Kukko 21/5-
- ◆ Countersupport . e.g. -Kukko 22/1-



Note

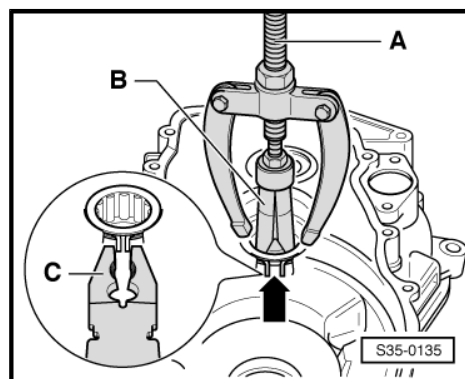
- ◆ When installing new pinions or drive train, observe the technical data:
- ◆ Insert all bearings, gears and synchronizer rings onto the output shaft with gear oil.
- ◆ Do not interchange the synchronizer rings, if re-used always assign to the original gear.

Pull out the cylindrical-roller bearing from the clutch housing

- When removing compress circlip -arrow- of the cylindrical-roller bearing with pliers -C-.

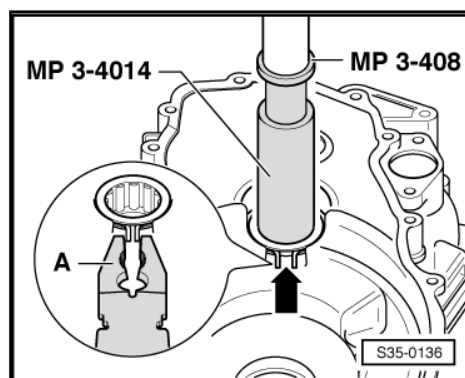
A - Countersupport . e.g. -Kukko 22/1-

B - Interior extractor 30...37 mm , e.g. -Kukko 21/5-



Press the cylindrical-roller bearing into the clutch housing

- Support the clutch housing by positioning pipe section - MP3-450 (VW 415 A)- (not visible in figure) directly under the bearing support.
- When inserting compress circlip -arrow- of the cylindrical-roller bearing with pliers -A-.
- Remove pliers before the cylindrical-roller bearing is in fitting position. The circlip must lock into the clutch housing slot.



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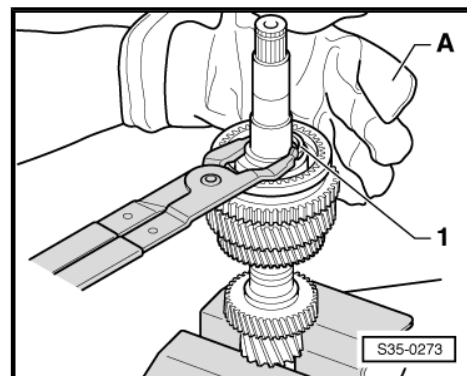
Press the circlip -1- out of the slot

A - Protective glove



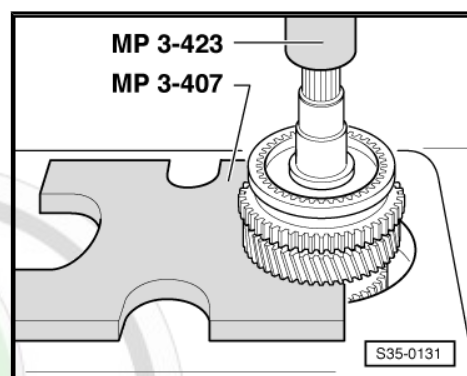
WARNING

Prevent uncontrolled ejection of the circlip.



Sliding sleeve and synchronizer body for the 1st and 2nd gear

- After removing the circlip jointly press off the 2nd gear sliding gear and the sliding sleeve/synchronizer body.



Fitting position of gear pinion of 3rd and gear pinion of 4th

- Place the 4th gear pinion -A- on the output shaft.

Fitting position:

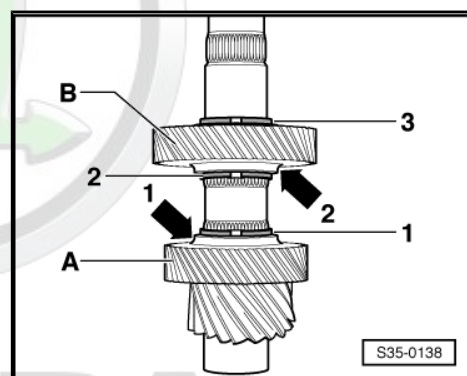
The collar -arrow 1- points towards the 3rd gear pinion -B-.

- Insert circlips -2- and -3-.
- Place the 3rd gear pinion -B- on the output shaft.

Fitting position:

The collar -arrow 2- points towards the 4th gear pinion -A-.

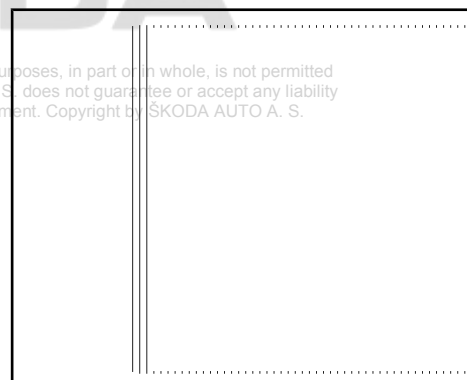
- Insert circlip -1-.



Check 1st and 2nd gear inner ring for wear

- Press the inner ring on the cone of the sliding gear and measure clearance "a" with a feeler gauge.

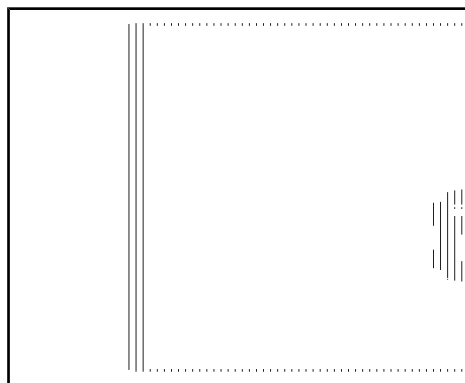
Dimension "a"	Installation dimension	Wear limit
1st and 2nd gear	0.75 ... 1.25 mm	0.3 mm



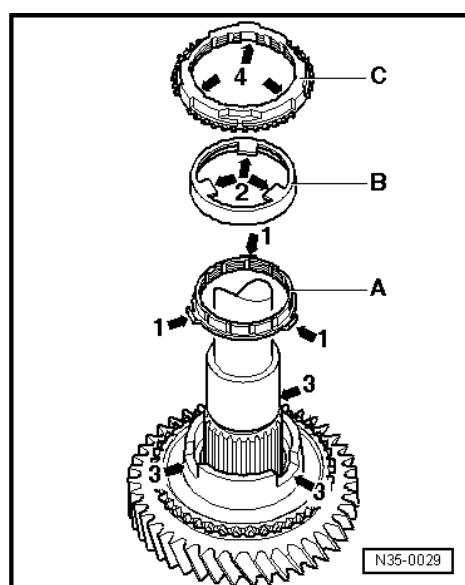
**Check 1st and 2nd gear synchronizer ring for wear**

- Press the synchronizer ring, outer ring and inner ring on the cone of the sliding gear and measure clearance “a” with a feeler gauge.

Dimension “a”	Installation dimension	Wear limit
1st and 2nd gear	1.2 ... 1.8 mm	0.5 mm

**Fitting position of the outer ring, inner ring and 2nd gear synchronizer ring**

- Position the inner ring -A- on the 2nd gear sliding gear. The angled lands -arrow 1- point towards the outer ring -B-.
- Position the outer ring -B-.
- Lock the lands -arrows 2- in the recesses -arrows 3- of the sliding gear.
- Position the synchronizer ring -C-.
- Lock the recesses -arrows 4- in the lands -arrows 1- of the inner ring -A-.

**Disassembling and assembling the sliding sleeve/1st and 2nd gear synchronizer body**

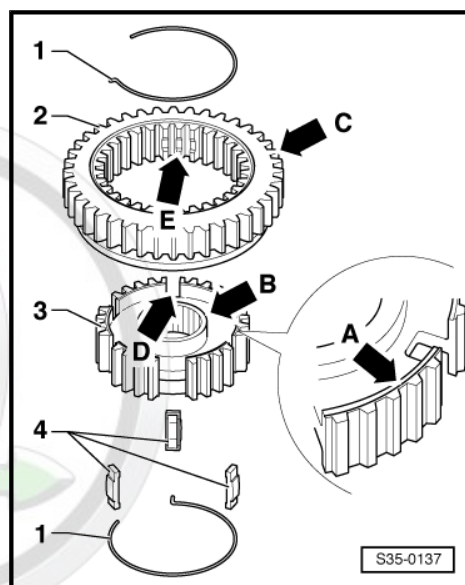
- 1 - Spring
- 2 - Sliding sleeve
- 3 - Synchronizer body
- 4 - Arresters

- Slide the sliding sleeve over the synchronizer body.

Fitting position:

After assembly the groove on the front side -arrow A- and the higher collar -arrow B- of the synchronizer body point towards the outer serration of the sliding sleeve -arrow C-.

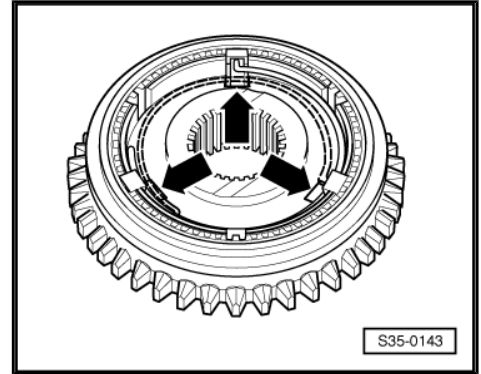
The deeper recesses -arrow D- of the arresters in the synchronizer body and the recesses -arrow E- in the sliding sleeve must be positioned above one another.



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Assemble sliding sleeve / 1st and 2nd gear synchroniser body

- The sliding sleeve is drawn over the synchronizer body.
- Insert the arresters in the deeper recesses -arrows- and mount the springs with 120° offset. The angled end of the spring must grip into the hollow arrester.

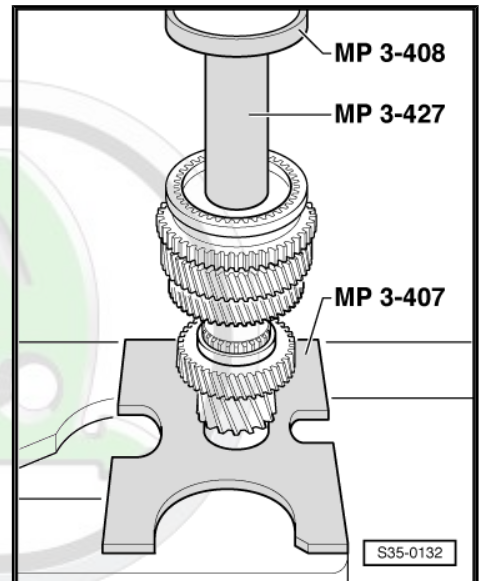


Press on the sliding sleeve/1st and 2nd gear synchronizer body

Fitting position:

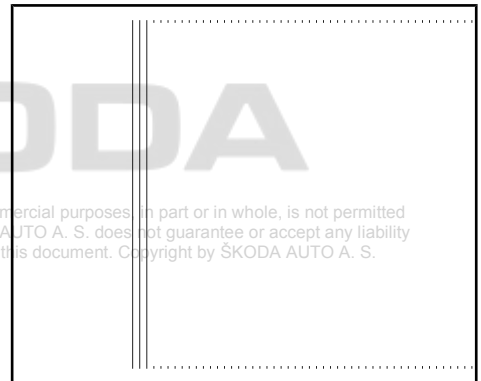
The slot for the shift fork in the sliding sleeve points towards the 1st gear, the serration of the reversing gear points towards the 2nd gear.

- Rotate the synchronizer ring in such a way that the slots are flush with the arresters.



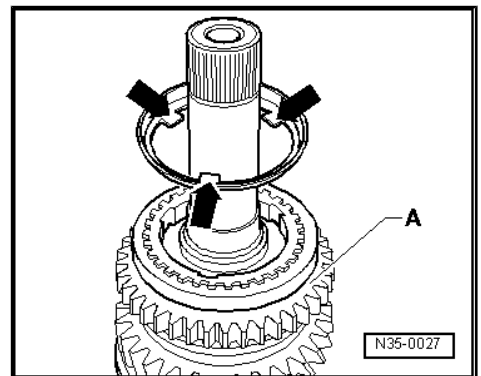
Insert the circlip

- Insert the 1st gear synchronizer ring in the sliding sleeve/synchronizer body.



Fitting position of the 1st gear outer ring

The pegs -arrows- point towards the reversing gear serration -A-.

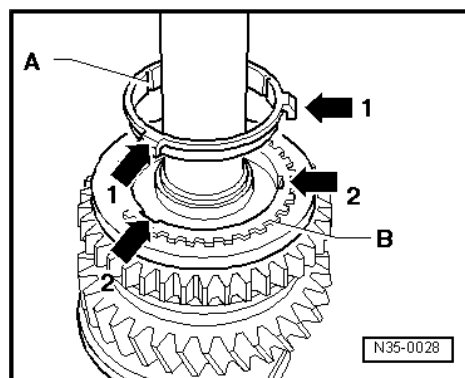


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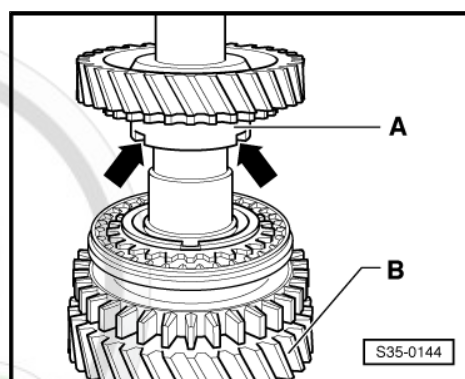
Fitting position for 1st gear inner ring -A-

The pegs -arrow 1- lock into the recesses -arrow 2- of the synchronizer ring -B-.



Fitting position 1st gear sliding gear

The higher collar -A- points towards the 2nd gear -B-. The recesses in the collar -arrows- lock into the pegs of the outer ring
⇒ [page 167](#)



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39 – Final drive - differential

1 Sealing rings

⇒ [“1.1 Installation overview - sealing rings”, page 169](#)

⇒ [“1.2 Replacing left sealing ring”, page 169](#)

⇒ [“1.3 Replacing right sealing ring”, page 171](#)

1.1 Installation overview - sealing rings

1 - Sealing ring

- ☐ for drive shaft
- ☐ Replace
⇒ [“1.3 Replacing input shaft sealing ring”, page 160](#)

2 - Sealing ring

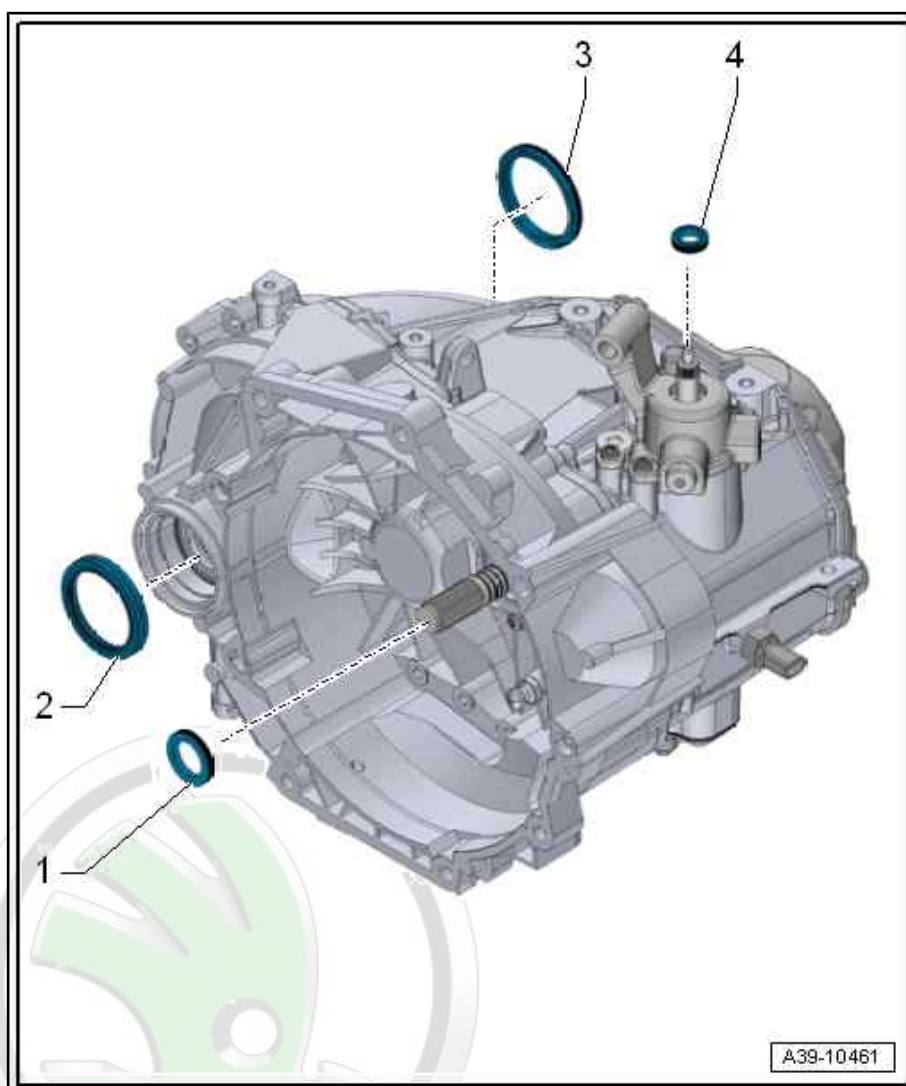
- ☐ for right flange shaft
- ☐ Replace
⇒ [“1.3 Replacing right sealing ring”, page 171](#)

3 - Sealing ring

- ☐ for left flange shaft
- ☐ Replace
⇒ [“1.2 Replacing left sealing ring”, page 169](#)

4 - Sealing ring

- ☐ for the gearshift shaft
- ☐ Replace
⇒ [“1.12 Replacing the sealing ring for the gear-shift shaft”, page 107](#)



1.2 Replacing left sealing ring

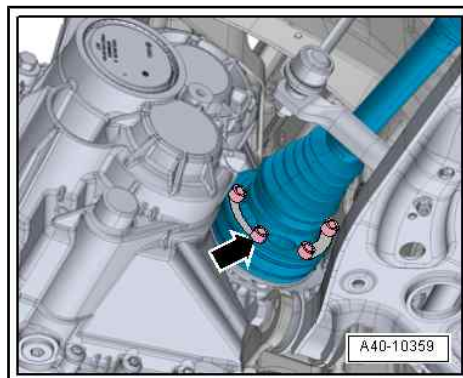
Special tools and workshop equipment required

- ◆ Inertia extractor - MP9-501-
- ◆ Extractor - MP3-419/37-
- ◆ Thrust piece - T10082-
- ◆ Sealing grease - G 052 128 A1-

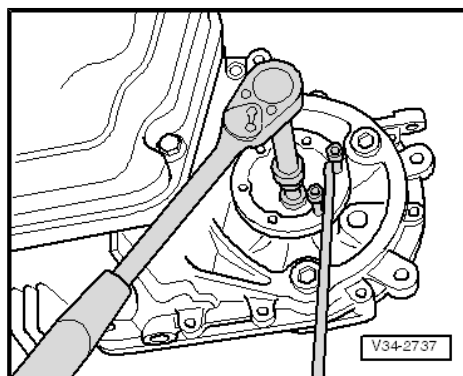


Removing

- Remove the left front wheel ⇒ Chassis, axles, steering; Rep. gr. 44 ; Wheels, tyres and raise the vehicle.
- Remove sound dampening system ⇒ General body repairs, exterior ; Rep. gr. 66 ; Noise insulation .
- Remove the front left wheelhouse liner ⇒ General body repairs, exterior; Rep. gr. 66 ; Wheelhouse liner; removing and installing front wheelhouse liner .
- Turn the steering to full left lock.
- Remove screws -arrow- for left flange shaft.
- Tie up the drive shaft as far as possible. Avoid damaging the paintwork on the drive shaft during this operation.
- Place the catch pan under the gearbox.

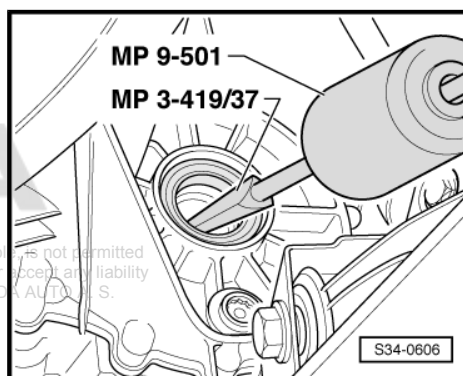


- Unscrew the fixing screw for the flange shaft; to do this, insert two screws in the flange and hold the shaft using a tyre iron.
- Remove flange shaft together with pressure spring.



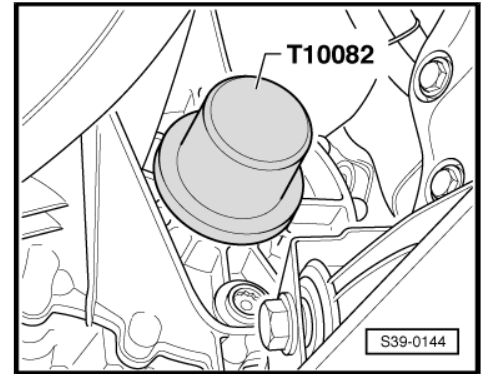
- Remove gasket ring for flange shaft with non-return valve - MP9-501- and extractor tool - MP3-419/37- .

Installing



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- Drive in new seal to stop, being careful not to cant seal.
- Fill half the space between the sealing lip and dust lip with sealing grease - G 052 128 A1- .
- Insert the flange shaft.
- Secure the flange shaft with the conical screw and tighten with tightening torque.
- Screw the propeller shaft onto the flange shaft ⇒ Chassis, axles, steering; Rep. gr. 40 ; Propeller shaft; remove and install propeller shaft .
- Check gear oil level
⇒ ["6.1 Checking the gear oil level", page 151](#) .
- Install the left front wheel housing liner ⇒ General body repairs, exterior; Rep. gr. 66 ; Wheel housing liner; Remove and install front wheel housing liner .
- Install the noise insulation ⇒ General body repairs, exterior; Rep. gr. 66 ; Noise insulation; Summary of components - noise insulation .
- Install wheel ⇒ Chassis, axles, steering; Rep. gr. 44 ; Wheels, tyres; wheel change .



Tightening torque

Flange shaft on gearbox (conical screw)	⇒ "2.1 Summary of components - Differential", page 173
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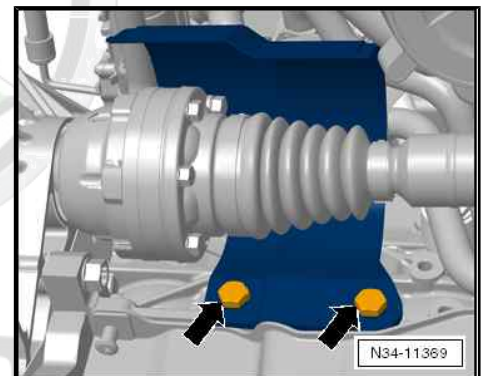
1.3 Replacing right sealing ring

Special tools and workshop equipment required

- ◆ Inertia extractor - MP9-501-
- ◆ Extractor - MP3-419/37-
- ◆ Drive bushing - MP3-489 (3158)-
- ◆ Sealing grease - G 052 128 A1-

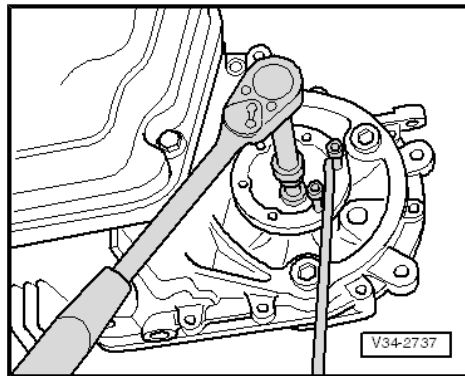
Removing

- Remove the noise insulation ⇒ General body repairs, exterior; Rep. gr. 66 ; Noise insulation; Summary of components - noise insulation .
- Turn steering to full right lock.
- If applicable remove protection plate for drive shaft from the engine -arrows-.
- Unscrew the drive shaft from the flange shaft.
- Tie up the drive shaft as far as possible. Avoid damaging the paintwork on the drive shaft during this operation.
- Place the catch pan under the gearbox.



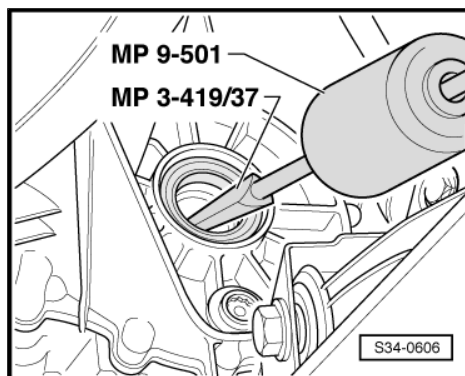


- Unscrew the fixing screw for the flange shaft; to do this, insert two screws in the flange and hold the shaft using a tyre iron.
- Remove flange shaft together with pressure spring.

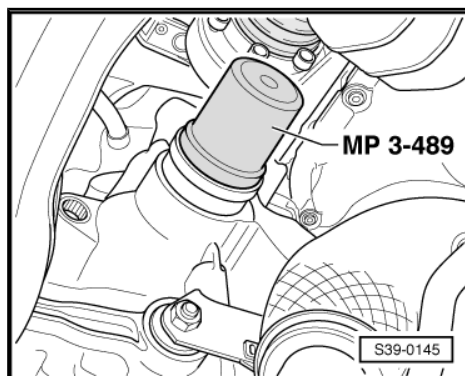


- Remove gasket ring for flange shaft with non-return valve - MP9-501- and extractor tool - MP3-419/37- .

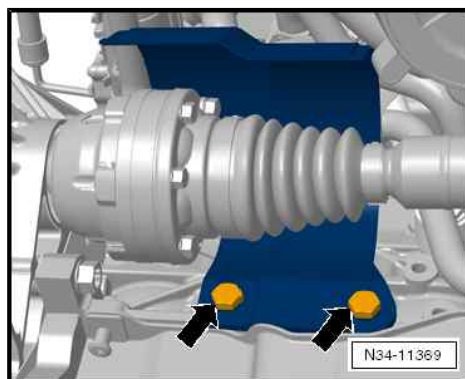
Installing



- Drive in new seal to stop, being careful not to cant seal.
- Fill half the space between the sealing lip and dust lip with sealing grease - G 052 128 A1- .
- Insert the flange shaft.
- Secure the flange shaft with the conical screw and tighten with tightening torque.
- Screw the propeller shaft onto the flange shaft ⇒ Chassis, axles, steering; Rep. gr. 40 ; Propeller shaft; remove and install propeller shaft .



- Fit protection plate for drive shaft -arrows-, where available, onto the engine.
- Check gear oil level
⇒ [“6.1 Checking the gear oil level”, page 151](#) .
- Install the noise insulation ⇒ General body repairs, exterior; Rep. gr. 66 ; Noise insulation; Summary of components - noise insulation .



Tightening torques

Flange shaft on gearbox (conical screw)	⇒ “2.1 Summary of components - Differential”, page 173
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2 Differential

⇒ [“2.1 Summary of components - Differential”, page 173](#)

⇒ [“2.2 Disassembling and assembling differential gear”, page 174](#)

⇒ [“2.3 Adjusting the differential”, page 177](#)

2.1 Summary of components - Differential

1 - Conical screw, 25 Nm

- ☐ screw into threaded piece Pos. 8

2 - Right flange shaft

3 - Pressure spring for flange shaft

- ☐ fitted behind flange shafts

4 - Thrust washer

- ☐ Fitting position: Shoulder for compression spring

5 - Conical ring

- ☐ Fitting position: Cone for differential gear housing

6 - Circlip

- ☐ holds the conical ring, stop disc and pressure spring in position when the flange shaft is removed

7 - Differential bevel gear, large

- ☐ installing ⇒ [page 177](#)

8 - Threaded part

- ☐ installing ⇒ [page 177](#)

9 - Differential bevel gear shaft

- ☐ when removing, the tensioning sleeve Pos. 18 is cut out ⇒ [page 177](#)
- ☐ installing ⇒ [page 177](#)

10 - Differential bevel gear, small

- ☐ installing ⇒ [page 177](#)

11 - Stop disc compound

- ☐ when installing moisten with gearbox oil

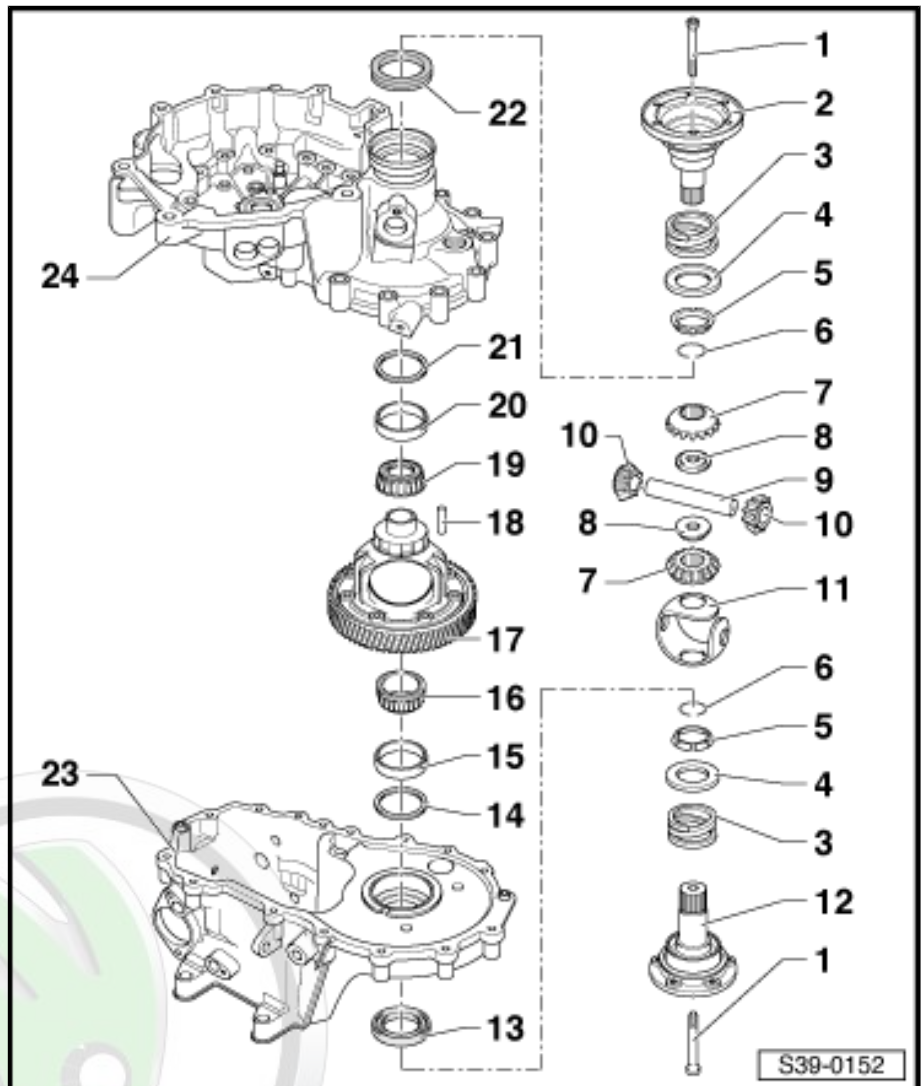
12 - Flange shaft left

13 - Seal ring for left flange shaft

- ☐ replace with installed gearbox ⇒ [“1.2 Replacing left sealing ring”, page 169](#)

14 - Adjusting washer S₁

- ☐ for differential
- ☐ always 1 mm thick





- ☐ on gearboxes as of production date 12.2006, the adjusting washer S1 is omitted for the outer ring/tapered-roller bearing ⇒ ["2.3 Adjusting the differential", page 177](#)
- ☐ Bearing pedestal for outer ring/tapered-roller bearing is adapted

15 - Outer ring/tapered-roller bearing

- ☐ removing ⇒ [page 175](#)
- ☐ pressing on ⇒ [page 175](#)

16 - Inner ring/tapered-roller bearing

- ☐ remove ⇒ [page 175](#)
- ☐ pressing on ⇒ [page 176](#)

17 - Differential housing

- ☐ with gear pinion for final drive

18 - Tensioning sleeve

- ☐ to secure the differential bevel gear shaft
- ☐ is cut when removing ⇒ [page 177](#)

19 - Inner ring/tapered-roller bearing

- ☐ remove ⇒ [page 176](#)
- ☐ pressing on ⇒ [page 177](#)

20 - Outer ring/tapered-roller bearing

- ☐ pressing off ⇒ [page 176](#)
- ☐ pressing on ⇒ [page 176](#)

21 - Adjusting washer S2

- ☐ for differential
- ☐ Determine thickness ⇒ ["2.3 Adjusting the differential", page 177](#)

22 - Seal ring for right flange shaft

- ☐ replace with installed gearbox ⇒ ["1.3 Replacing right sealing ring", page 171](#)

23 - Gearbox housing

- ☐ repairing ⇒ ["5.4 Repairing gearbox housing", page 149](#)
- ☐ on gearboxes as of production date 12.2006, the adjusting washer S1 is omitted for the outer ring/tapered-roller bearing ⇒ ["2.3 Adjusting the differential", page 177](#)
- ☐ Bearing pedestal for outer ring/tapered-roller bearing is adapted

24 - Clutch housing

- ☐ repairing ⇒ ["5.5 Repairing clutch housing", page 149](#)

2.2 Disassembling and assembling differential gear

Special tools and workshop equipment required

- ◆ Pressure plate - MP3-406 (VW 401)-
- ◆ Pressure plate - MP3-407 (VW 402)-
- ◆ Pressure spindle - MP3-408 (VW 412)-
- ◆ Pipe section - MP3-409 (VW 418 A)-
- ◆ Thrust piece - MP3-411 (VW 454)-
- ◆ Press-on sleeve - MP3-412 (VW 455)-
- ◆ Distance sleeve - MP3-458/2-
- ◆ Thrust washer - MP3-413 (VW 510)-
- ◆ Pressure pipe - MP6-408 (30-14)-



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- ◆ Thrust piece - MP3-431 (3002)-
- ◆ Counterholder - MP1-223 (3067)-
- ◆ Pipe - MP6-419 (3259)-
- ◆ Tube for wheel bearing - T30019 (3345)-
- ◆ Tapered-roller bearing extractor - V.A.G 1582-
- ◆ Tool - V.A.G 1582/4-
- ◆ Interior extractor - Kukko 21/7-
- ◆ Countersupport - Kukko 22/2-
- ◆ Drive bushing - MP3-427 (40-21)-
- ◆ Tool - V.A.G 1582/3-
- ◆ Hot-air blower - V.A.G 1416-

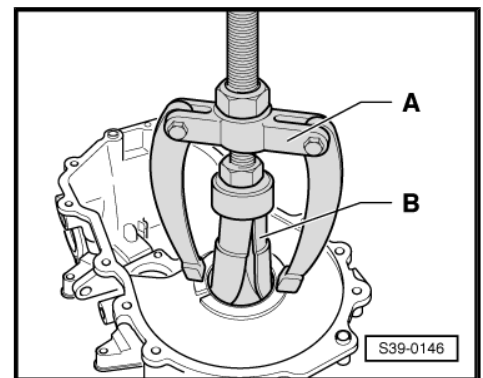
**Note**

- ◆ *Before installing, heat the inner ring/tapered-roller bearing with the hot-air blower - V.A.G 1416- to 100°C.*
- ◆ *Replace both tapered-roller bearings together.*
- ◆ *When replacing the tapered-roller bearings. the differential housing. the gearbox housing or the clutch housing. set the differential gear ➔ "2.3 Adjusting the differential", page 177 .*

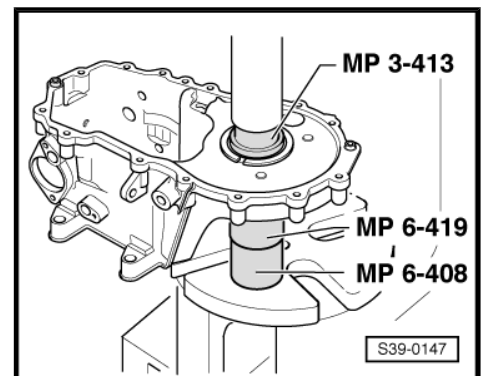
Remove outer ring/tapered-roller bearing from the gearbox housing

A - Countersupport . e.g. -Kukko 22/2-

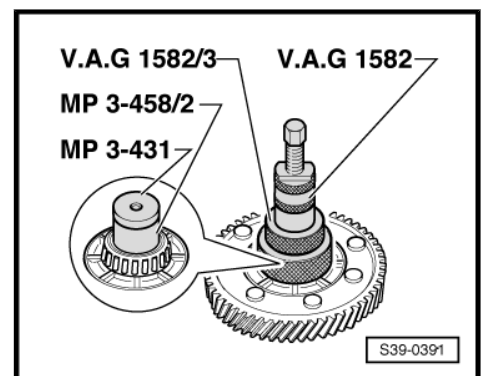
B - Interior extractor 46...58 mm , e.g. -Kukko 21/7-

**Press in outer ring/tapered-roller bearing in the gearbox housing**

- Position adjusting washer S₁ always 1 mm thick, under the outer ring.
- Support the gearbox housing with insertion tube - MP6-419 (3259)- directly below the bearing support.

**Remove inner rings/tapered-roller bearing****Note**

Both inner rings/tapered-roller bearings of the differential housing are removed in the same way.



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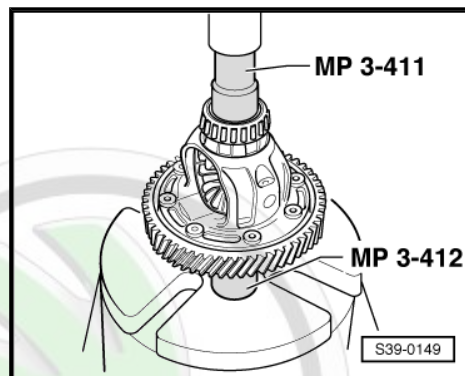
Press on inner rings/tapered-roller bearing



WARNING

Wear protective gloves!

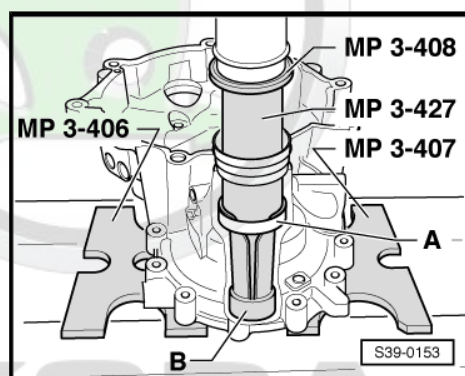
- Before pressing on, heat the inner ring/tapered-roller bearing with the hot-air blower - V.A.G 1416- to approx. 100°C.
- Support the opposite side of the inner ring with an insertion bushing - MP3-412 (VW 455)- .



Press the outer ring/tapered-roller bearing -A- out of the clutch housing

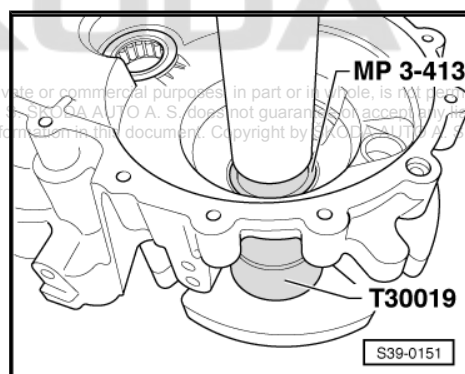
B - Interior extractor 46...58 mm , e.g. -Kukko 21/7-

- While doing so tighten the interior extractor behind the outer ring/tapered-roller bearing.



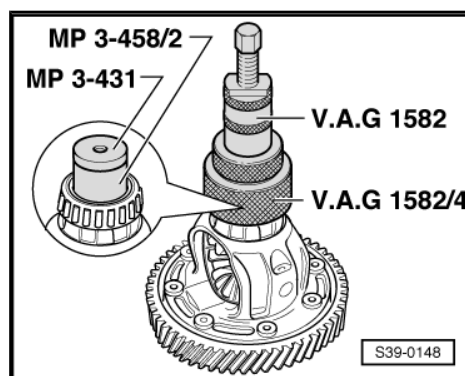
Press outer ring/tapered-roller bearing into the clutch housing

- Support the clutch housing with a pipe - T30019 (3345)- directly below the bearing support.



Remove bearing inner ring for taper roller bearing

- Before fitting the extractor, position distance sleeve - MP3-458/2- and thrust piece - MP3-431 (3002)- on the differential gear housing.



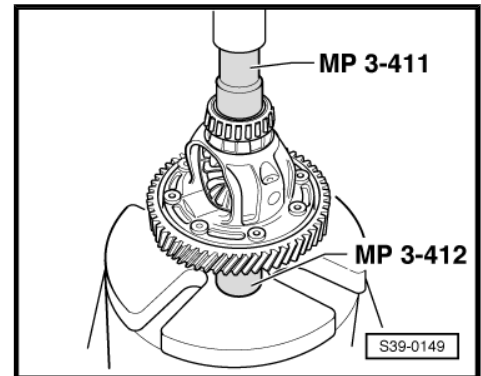
Press on inner ring/tapered-roller bearing



WARNING

Wear protective gloves!

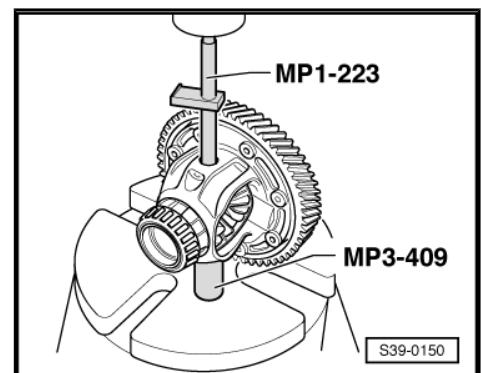
- Before pressing on heat the inner rings/tapered-roller bearing to approx. 100°C.



Press out differential bevel gear shaft

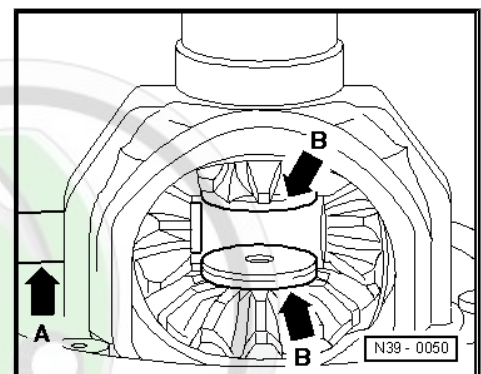
The tensioning sleeve is cut during pressing out.

- Drive the remaining part of the tensioning sleeve out of the differential gear housing.



Install differential bevel gears, large and small

- Install stop disc compound with gearbox oil.
- Insert both large differential bevel gears and secure (e.g. with flange shaft).
- Insert both small differential bevel gears with a 180° offset.
- Push in the differential bevel gear shaft -arrow A- up to the first small differential bevel gear.
- Insert the threaded parts -arrows B- in the large differential bevel gears.
- Drive in the differential bevel gear shaft up to end position and secure with tensioning sleeve.



2.3 Adjusting the differential

Special tools and workshop equipment required

- ◆ Gauge block plate - MP3-405/17-
- ◆ Universal dial gauge bracket - MP3-447 (VW 387)-
- ◆ Pressure plate - MP3-407 (VW 402)-
- ◆ Pressure plate - MP3-406 (VW 401)-
- ◆ Pressure spindle - MP3-408 (VW 412)-
- ◆ Thrust washer - MP3-413 (VW 510)-
- ◆ Pressure pipe - MP6-408 (30-14)-
- ◆ Pipe - MP6-419 (3259)-
- ◆ Tube for wheel bearing - T30019 (3345)-
- ◆ Drive bushing - MP3-427 (40-21)-
- ◆ Dial gauge

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The differential must be re-set when the following components are replaced:

- ◆ Gearbox housing
- ◆ Clutch housing
- ◆ Differential housing

or

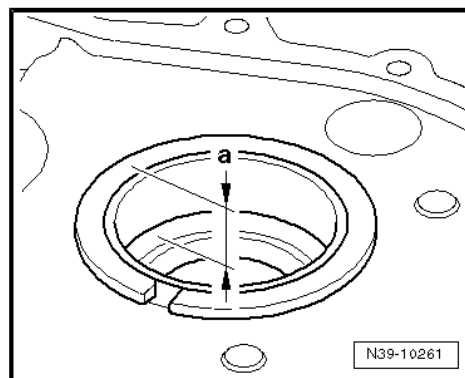
- ◆ Tapered-roller bearings of the differential gear

Adjusting washer S₁



Note

- ◆ *on gearboxes as of production date 12.2006, the adjusting washer S₁ is omitted for the outer ring/tapered-roller bearing in the gearbox housing.*
- ◆ *Bearing pedestal for outer ring/tapered-roller bearing is adapted.*
- Measure the depth of the bearing seat for outer ring/tapered-roller bearing in the gearbox housing and determine the depth requirement for the adjusting washer S₁:



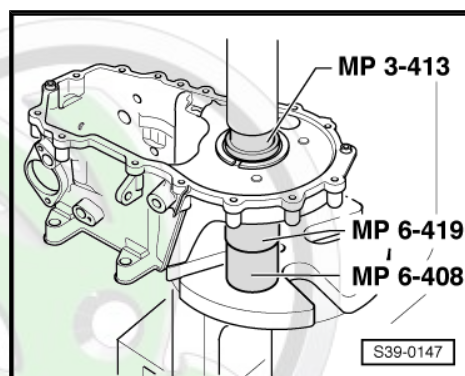
Dimension "a"	Adjusting washer S ₁
15.2 mm	no
16.2 mm	yes

- Press in outer ring/tapered-roller bearing (gear train side), where necessary, also press it in properly with the adjusting washer S₁ (always 1 mm thick), into the gearbox housing.

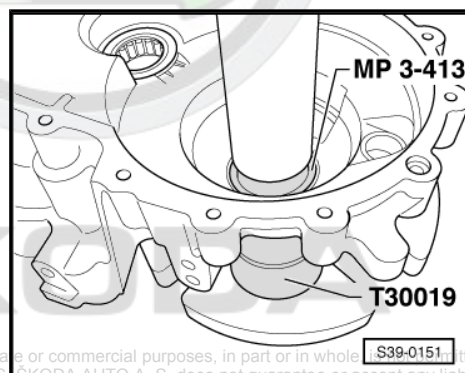


Note

The inner and outer ring of the tapered-roller bearing are paired. Do not interchange!



- Press the outer ring/tapered-roller bearing (opposite pinion side) without adjusting washer into the clutch housing.
- Insert the differential in the gearbox housing.
- Position the clutch housing and tighten 5 screws to the given tightening torque
⇒ ["5.1 Summary of components - Clutch housing", page 145](#).



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- Set the dial gauge with 1 mm preload on “0”.

A - Dial gauge extension 30 mm

- Set the dial gauge to “0” with 1 mm bias.
- Move the differential gear up and down, read off and write down the clearance on the dial gauge. (Example: 1.50 mm)

Determining the thickness of adjusting washer S₂

The prescribed bearing preload is reached by adding S₂ to the established measured value a constant compression value (0.35 mm).

Example

measured value	1.50 mm
+ pressure (const. value)	0.35 mm
Thickness of the adjusting washer S ₂ =	1.85 mm

- Remove the clutch housing and press out the outer ring/tapered-roller bearing -A-.

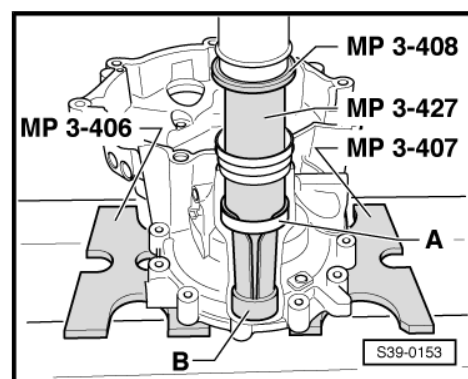
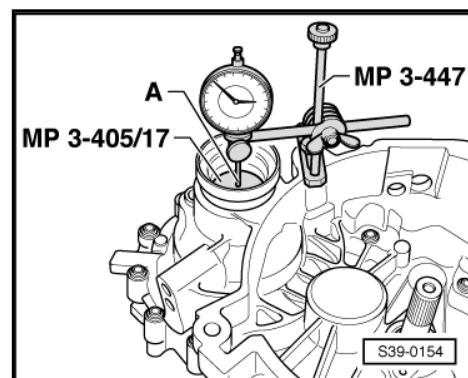
B - Interior extractor 46...58 mm , e.g. -Kukko 21/7-

- Assign the adjusting washer (s) via the ⇒ Electronic Catalogue of Original Parts .

The various thicknesses make it possible to achieve the exact shim thickness required.

If the measured washer thickness is greater than the one listed in the ⇒ Electronic catalogue of original parts , 2 washers corresponding to the measured value may be fitted.

- Insert adjusting washer S₂ with the required thickness (in this instance 1.85 mm) and press the outer ring/tapered-roller bearing back into the clutch housing.
- Position the clutch housing and tighten the screws to the given tightening torque
⇒ [“5.1 Summary of components - Clutch housing”, page 145](#) .



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